1: Hoebel E-5 (1933) 1940 NO6 Comanche NO6

gate the general cultural background of the Shoshones and to determine, if possible, the basic legal patterns of the Shoshones for comparative reference to those revealed by the Comanches. The comparative results and inferences may be found in Appendix A of this memoir.

With the enlisted interest of the American Council of Learned Societies resulting from the findings in Comanche and Shoshone culture, the Committee on Law History set up a project on American Indian law. In 1935 and 1936 the Committee projected a study of Cheyenne political and legal institutions which was carried out by the present author in collaboration with Karl Llewellyn. Cheyenne institutions reveal much in common with those found in Comanche society, for the economic base of both cultures is similar. Cheyenne culture is more sophisticated than Comanche; less adolescent, one might say. Comparatively, Cheyenne behavior represents a higher level of institutionalization, thus providing to a degree an extension of Comanche trends. The Cheyenne materials are being prepared for separate publication.

121 671 153 ●128 In studying Comanche legal institutions one must proceed by means of case histories. The Comanches underformalized their conception of their own behavior. To them legal action was merely an individual response to a threatening circumstance. It was not the playing of a role in a set legal institution. Thus the Comanches had no concept of law as an institution, or even as a set of rules. So, when the Comanche informant is asked such a question as this, "What was the rule when one man ran off with another's wife?", the answer comes in this form, "Well, I don't know about that. But I can tell you what happened when my uncle stole Horned Toad's wife." The Comanche and the case-trained American lawman proceed in like manner. What holds perforce for the Comanche should hold for the study of all primitive law. Legal behavior is *behavior* and should be treated as such. Malinowski has long since laid down the canon that behavior-in-fact is by no means in accord with the verbalized ideal to which a society may may give lip-service. The verbalized ideal is an important cultural fact when such ideal exists, but the actual conduct of a people is of more fundamental court. The verbalized ideal of the Comanche is the supremacy and free action of the individual. Case histories, when piled up, show that there were limiting legal mechanisms at work, however. The liberal use of case histories in the text is not for the purpose of providing interesting anecdote. The histories hold within themselves the juice of life-situations, revealing the sway and counter-play of emotion and motive, demonstrating the broad range of variability in conduct in given situations. Case histories give the native's coloring to the report, transmitting to the reader the *imponderabilia of native life* which Malinowski so aptly insists be given.

1: Hoebel E-5 (1933) 1940 NO6 Comanche NO6

WAR AND WAR LEADERSHIP

COUP AND STATUS

Comanche war notions conformed to the general Plains pattern of raiding and coup-counting.[1] The raid might be made by a party of any size, from a single warrior up. The coup was an individual exploit, made in any contact with the enemy, *after* it had been socially recognized both as achieved in fact and as worthy of distinction; a rough equivalent of an official citation after a modern engagement, if such were undiluted by political considerations.

The life of the Comanche male centered around warfare and raiding. The main objectives were the taking of horses, the counting of coup, and the killing of enemies. Motives for horse-taking were two. Horses, as we have seen, were the important form of property accumulation; the man who had a large herd was wealthy; he could afford generosity to his friends and relatives; he harbored visiting guests from other tribes. Horses also gained him prestige for bravery and cleverness; the taking of horses under difficult conditions provided opportunity for exploits of valor. Such exploits made reputation. Horses gained by inheritance, gift, or breeding reflected the first value, but not the second (except as a carry-over). The killing of enemies was similar in that it led to prestige through accumulation of war honors; but it showed a more direct tribal function when vengeance for the death of a tribesman came in question—though tribal interest was not absent from horse-taking; to have your horses stolen was to be out-matched and shamed by the successful thief (an out-triber).

It required more bravery to hit an adversary with a spear or a war club than to pierce him with a bow-driven arrow or a gun-driven bullet. Thus striking an enemy gave ground for an honored coup, while long-distance killing did not. The how of the killing mattered more than the killing itself. A coup was more valued than a scalp, for, "Anybody could scalp a dead man." But the Comanche considered the removal of a scalp under fire as worthy of a coup. How much scalp the Comanche took depended on how hot the circumstances were. He preferred to take the whole scalp, but if he was pressed for time he seized only what he could get. Scalps were used in the Victory Dance and were desirable as fringe decoration for shirts and shields.

In the foregoing, and in the following, the legal analysis is deliberately pushed further than the Comanche would consciously push it. In any

[1] Cf. George Bird Grinnell, *Coup and Scalp Among the Plains Indians* (American Anthropologist, vol. 12, 1910), pp. 296–310.

1: Hoebel E-5 (1933) 1940 NO6 Comanche NO6

128 727 555 primitive legal thinking, the fact and its legal recognition tend to fuse, and either is spoken of as the whole; the modern layman, e.g., still speaks of "my money in the bank" to describe what is neither his money, nor any money, nor in the bank, but a debt the bank owes him. So with this matter of the coup. The exploit is in strictness no coup, but the new material for 727 one. If unrecognized, the exploit becomes a matter of individual memory, 555 perhaps of individual grievance. *Only recognition in due "legal" form turns deed into coup.*[2] But as soon as recognized, the recognition aspect fades from thought, and the deed that was its reason and justification *seems* to stand alone. As in all cases where legal rights are accurately tailored to the facts, it is enough to deal with the facts. But that does not mean that the legal phases can be overlooked. The minute they are lacking, or are in dispute, they will become important, and may become crucial.[3] This is the case with an exploit accomplished, unwitnessed, and not believed, or of one claimed by each of two or several as his own.

The stealing of tethered horses from within a hostile camp ranked as a very high honor, but it was not nearly so valued as striking a fallen enemy who lay near his own lines, or drawing blood from an enemy in hand to hand combat.

The Comanche honored two coups struck on the same victim by different persons. This arrangement was an efficient way of providing sufficient coups to meet the cultural demands of the society—an inflation of the currency of war prestige. The first man to reach the body of a fallen enemy struck it with his weapon and uttered the cry, "*ahé*" ("I claim it"), gaining thereby equal honor with the man who had done the killing. But if a bow or gun had been used to bring down the enemy, this second coup-counter received greater honor for his deed than did the slayer himself.

182 727 555 The problem of adjustment of institution to social end is interesting. Superficially, skill at long-distance killing would seem of more immediate social value to a fighting people. But the stress on hand-to-hand valor or dangerously close approach to the enemy is more than shallow glorification of wolf over fox. The deeds honored are in good part the kind of deeds that toughen a warrior to stand when he is needed. Grinnell, on the other hand, sees in it merely a cultural survival of the traditional days when the Cheyenne, for instance, fought perforce with sticks and stones because they had no bows or guns.[4]

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[2] Note the ritual formula for the transference of a recognized coup by its owner-performer when the coup is given to a friend as a gift. See p. 29.

[3] Cf. Ritual Evidence, pp. 103–106.

[4] George Bird Grinnell, *The Cheyenne Indians* (New Haven, 1924), vol. 2, p. 36.

4: Goldstein D-5 (ca. 1930)1934
NO6 Comanche NO6

speaks of the 'Comances' as "in stature rather low, and in person often approaching to corpulency." Richardson (1829, p. 61) quotes Marcy's description of the Comanches in 1854 as men "about medium stature, with bright copper-colored complexions and intelligent countenances, in many instances with aquiline nose, thin lips, black eyes and hair, with but little beard." Finally, Boas (1895) reports stature for seventy-four and cephalic index for twenty-nine Comanche males measured by his students at the Chicago Columbian Exposition of 1893. Except for additional casual statements about their appearance, nothing else on the physical status of the Comanches, to the writer's knowledge, has appeared in print.

PRESENT STUDY

The present study comprises thirty-five full- and probably full-blood males, twenty-five full-blood females, and twenty-five mixed bloods. The numbers are regrettably small, but mixture of blood is so prevalent that little better was possible under the circumstances. Virtually every town and surrounding environs where Comanches lived—Lawton, Cache, Fletcher, Walters, Mt. Scott—was visited in the search for full-bloods. By full-blood the writer means a person with no other blood than that of his tribe as far back as he can remember, and as far as other, older, members of the tribe recall; this criterion must agree with the physical diagnosis based on character of hair, color of eyes and hair, Hrdlička's skin reaction, pigmentation, general appearance, etc. All reasonable precautions were taken in the present study to insure accuracy of judgment.

The number of virtually certain full-bloods, nineteen males and twenty-five females, although small, is believed to be a typical group. Data are therefore given in some detail, more so since the full-blood is rapidly becoming totally eliminated and other information is meager.

A number of the subjects examined appeared full-blood, yet for one reason or another, the diagnosis could not be as certain as desirable. These subjects were designated as 'prob-

4: Goldstein D-5 (ca. 1930)1934
NO6 Comanche NO6

able' full-bloods. They appear more divergent metrically than either full- or mixed-bloods, and are therefore treated separately.

The data for the mixed-bloods will not be given in detail, inasmuch as the group is made up about equally of Mexican, other Indian, and white admixture, no one sub-group being large enough to give a reliable sample. Mixed-bloods were measured incidentally, all time and effort being exerted in mustering full-bloods. It may be mentioned, however, that, in general, the mixed-bloods, especially the Mexican-Comanches, resembled the full-bloods to a remarkable degree, so much so that not infrequently it was quite difficult to distinguish one from the other. Exactly this same situation was commented upon long ago by Fitzpatrick, as quoted by Mooney.[6]

There have been suggestions, even positive assertions, that the Comanches were physically as well as linguistically related to the Shoshoni.[7] The Comanches have been compared, therefore, with the latter in as great detail as the available Shoshoni material allowed. The Apache (San Carlos), Dakota Sioux, Indians of the Southwest and Mexico, and Old U. S. Whites, have also been more or less utilized for comparative purposes because of similarity to, or to show in sharper relief, the Comanche characters.

Measurements were taken with tested, standard instruments, and the methods followed are those endorsed by the International Agreement.[8] The writer is deeply indebted to Drs. Aleš Hrdlička, of the U. S. National Museum, and Truman Michelson, of the Bureau of American Ethnology, for their instructions in method and invaluable advice throughout

[6] Loc. cit., p. 174.

[7] "Physically, the Comanche retain something of the heavy featured face of the true Shoshone . . . ." (Farrand, '04, p. 144).

". . . . it is highly probable that if the fact could be ascertained, which I have no doubt a thorough research would establish, it would be shown that the Shoshoneans, Comanches, and Utes were formerly one and the same people—a conclusion based upon the similarity of their language—and physical characteristics." (Clark, 1885, p. 119.)

[8] Hrdlička (A.), Anthropometry. The Wistar Institute, Philadelphia, 1920.

5: Carlson & Jones E, N-4, 5 (1933)1939
NO6 Comanche NO6

the plains proper have been gathered chiefly as incidental parts of larger ethnographic studies, are generally meager, and are widely scattered. Two notable lists of plants used by Indians of the northern Plains are those of Grinnell for the Cheyenne (9) and McClintock for the Blackfoot (13). For the tribes of the southern Plains there is almost nothing available.[2] It is to assist in filling this hiatus in southern Plains ethnobotany that this paper is offered.

The data have been tabulated in order to present the material in compact form and to provide a convenient listing of plants by scientific name, common name, Comanche name, or by use (Table I). In the discussion the plants are arranged according to function, i.e. nutritive, medicinal, technological, and the like. Whenever convenient, identical or similar uses of the same or related plants by other tribes are pointed out. A small amount of data on Comanche uses of plants is drawn from other sources. We are grateful to Dr. E. Adamson Hoebel for permission to include some of his unpublished notes on plant names and plant uses of the Shoshone Indians, collected among the northern Shoshone of the Fort Hall Reservation, Idaho, in 1934.

The phonetic alphabet employed in recording the Comanche plant names is that of the International Phonetic Association. Since this alphabet is in common use and should be readily available to the reader it is not reproduced here.[3] We are further grateful to Dr. Hoebel for assistance in checking the phonetics of plant names.

Wissler (26, pp. 218–219) lists among the chief traits of the typical Plains tribes "the dependence upon the buffalo or bison, and the very limited use of roots and berries." Marcy and McClellan (15, p. 102) state that fresh meat was the only food of the Comanche "with the exception of a few wild plants which they find on the prairies." Our data seem to indicate that rather full use was made of the available flora. Many fruits and berries were eaten and must have offered a welcome variation to the monotony of the meat diet. Nuts, starchy roots, bulbs, and various other plant parts were also utilized. Some of these offered only fresh seasonal food, and others

[2] Since this paper was written a monograph by P. A. Vestal and R. E. Schultes has appeared in which over a hundred Kiowa economic plants are discussed (*The Economic Botany of the Kiowa Indians as It Relates to the History of the Tribe*, Botanical Museum, Cambridge, Mass., 1939, 110 p.).

[3] For a slightly modified form of this alphabet see Bloomfield (2, p. 547).

[Text continues on p. 526.—Analyst]

14: Stewart E-5 (1936-1938)1944 NR 13 Northern Paiute
Delaware NM7
Winnebago NP12
Comanche NO6

APPENDIX II. PEYOTE ELEMENT DISTRIBUTION LIST

The distribution list in this section was first devised upon the basis of experience with Ute peyotism and a study of published literature on the peyote cult generally.[*] The published accounts of the cult, however, did not contain the detailed information necessary to answer all the points raised, and so a blank copy of the list and a request to fill it out were sent to several ethnographers known to have attended peyote meetings. The response was most gratifying, time and knowledge being given freely. The locations of the tribes represented in the element list are indicated on map 2.

SYMBOLS USED IN THE ELEMENT LIST

+	Element present	( )	Exactness of data doubtful
—	Element absent	R	Recent development
Blank	Information lacking	*	Indicates that a note to the element is appended at the end of the list

SOURCES AND COLUMN ABBREVIATIONS

The sources for the data in both the list and the notes to the list, and the abbreviations at the heads of columns, are as follows:

13 T: Composite picture of cult of thirteen tribes visited by La Barre and Schultes, mostly in Oklahoma (Kickapoo, Kiowa, Quapaw, Shawnee, Wichita, Caddo, Comanche, Delaware, Osage, Oto, Pawnee, Ponca, Southern Cheyenne). Richard Evans Schultes, Peyote and Plants used in the Peyote Ceremony, HU-BML 4:127–152, 1937, with additions made on list by La Barre, 1938.

K-A: Kiowa-Apache. List filled in and notes supplied by J. Gilbert McAllister from information obtained during ethnographic field work performed 1933–1934 (eleven months) under the sponsorship of the University of Chicago.

Kio: Kiowa. List filled in and notes supplied by Weston La Barre. When returning the list La Barre wrote, "I believe that in peyotism tribal affiliation in this inter-tribal religion is far less important than leadership, i.e., what the particular leader's 'way' is, and from what leader he got his meeting." La Barre did field work in Oklahoma under the auspices of the Laboratory of Anthropology (1935), Yale University, and the American Museum of Natural History.

Com: Comanche in Oklahoma. List filled in and notes supplied by E. Adamson Hoebel.

Kic: Kickapoo in the vicinity of McLoud, Oklahoma. List filled in and notes supplied by John A. Noon, who attended a meeting during the summer of 1932. The Kickapoo leaders recognized that they "followed the Kiowa-Comanche 'way'."

Ab S: Absentee Shawnee of central Oklahoma. List filled in and notes supplied by Erminie W. Voegelin. Meeting attended in 1933. Voegelin reports three forms of the cult among the Absentee: (1) The Kiowa-Comanche form (the form which my list records); said to have been introduced about 1900 from the Kickapoo, who learned it from the Comanche; is the most popular form. (2) Caddo-Delaware variant of the "Wilson way," conducted by Ernest Spybuck. (3) Yuchi "way," conducted by Panther; considered by Voegelin's informants to be distinct from the Kiowa-Comanche version, yet probably only slightly variant. Membership in these forms of the cult does not interfere with participation in older Shawnee religious beliefs and ceremonies. The "Cherokee" or "Loyal" Shawnee in northeastern Oklahoma, however, take peyote "according to the Bible way . . . like those Ioways," which is La Barre's Oto "Christianised" version, and this does teach complete withdrawal from older native ceremonies.

De 1: Kiowa-Comanche type cult among the Delaware. List filled in by James C. Webber (a Delaware informant recommended by Dr. Frank Speck) and supplemented by Petrullo's published account, also principally from Webber.

De 2: "Wilson way" among the Delaware (La Barre's Caddo-Delaware). Abstracted from Petrullo's book, with additional notes supplied by James C. Webber. The list does not adequately bring out the degree of divergence which the cult has attained, which could only be done by devising a list based on the "Wilson way." The altar is greatly changed from the Kiowa-Comanche prototype and at times becomes extremely elaborate (see Petrullo, pls. 3–6).

Win: Winnebago of Nebraska. This is apparently a variant of the "Wilson way," although Alexis A. Praus, who filled in the list and supplied the notes, did not designate it as such. Praus attended

[*] Data for the Ute and Washo–Northern Paiute lists obtained in the field, and additional data on the cults of the Tarahumara, Tepehuan, Lipan Apache, Mescalero Apache, Kiowa, Oto, Delaware, Omaha, Iowa, Arapaho, Winnebago, and Taos from published literature, are part of my Ute Peyotism which has been accepted for publication by Anthropos.

11: Casagrande E,L-5 (1940) 1954
NO6 Comanche NO6
Oklahoma

COMANCHE LINGUISTIC ACCULTURATION: I*

JOSEPH B. CASAGRANDE
WASHINGTON, D. C.

1. Introduction
2. Comanche history
3. Aspects of Comanche language
3.0. Affinities within Uto-Aztecan
3.1. Consonants
3.2. Vowels
3.3. Prefixation
3.4. Infixation
3.5. Suffixation
3.6. Enclisis
3.7. Paradigm of clitic affixes
3.8. Compounding
3.9. Reduplication
3.10. Stem classes
3.11. Words
3.12. Syntax

* This is the first of three journal articles on Comanche Linguistic Acculturation which was prepared as a single long paper. The data on which this paper is based were collected among the Comanche Indians living in or near Indiahoma, Oklahoma, in the summer of 1940 when the writer was one of a field party of graduate students under the direction of George Herzog, then of the Department of Anthropology at Columbia University. A vocabulary of about 3500 words and phrases was collected, primarily by directly eliciting Comanche equivalents for English terms. James Chebahtah, an experienced Comanche-English interpreter, was the chief informant. Additional materials were supplied by Herman Asenap, Robert Coffee, huuwihtikwa?, an old woman who spoke only Comanche, and in varying amounts by several other informants. Tony Martinez, who was also fluent in Spanish, was an especially valuable linguistic informant. The vocabulary was checked by Herzog and myself for the accuracy of both phonetic transcription and meaning. Material gotten from one person was checked with a different informant.

I am indebted, first of all, to the Social Science Research Council of Columbia University whose financial aid made the trip possible; to George Herzog, now Professor of Anthropology at Indiana University, for his continued interest and many good offices; to my colleagues in the field who are in a very real sense my collaborators; to Professors Joseph H. Greenberg, William Duncan Strong, Julian H. Steward, and Alfred L. Kroeber for their guidance and good counsel; to William Smalley who has generously lent both his time and knowledge of the Comanche language; and finally to my Comanche friends and informants.

[p. 140-A]

11: Casagrande E,L-5 (1940) 1954
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121 a case study of Comanche and a broader excursion into method.

128 While the acculturation vocabulary that was collected is extensive, additional textual materials and examples of day to day speech behavior collected from a representative range of unilingual and bilingual speakers would have been invaluable in establishing usages and investigating the ramifying effects of contact on Comanche. A further limitation is felt in the lack of a comprehensive treatment of Comanche grammar. If such were available, the analysis would have gained a greater measure of incisiveness.

177 2. Since their emergence and secession
178 from an early Plateau Shoshone tradition,[10]
175 the Comanche have undergone a 250 year career of marked culture change and contact.[11] The earliest period was essentially one of cultural adjustment to a new style of life made possible by the acquisition of the horse, and culminated in the participation of the Comanche in the brief though brilliant florescence of Plains culture[12] that reached its climax in the decades spanning the year
177 1800. Thereafter the story is one of the increasing pressure of westwarding Americans

[10] For a description of Basin-Plateau Shoshone culture see Julian H. Steward, Basin-Plateau Aboriginal Sociopolitical Groups, BAE-B 120 (1938); also Culture Element Distributions: XIII, Nevada Shoshone, Anthropological Records, 4.2 (University of California, 1941), and Culture Element Distributions XXIII, Northern and Gosiute Shoshone, Anthropological Records, 8:3, (University of California, 1943).

[113] [11] The principle references for this chapter are Martha L. Buntin, History of the Kiowa, Comanche and Wichita Indian Agency, M.A. Thesis, Univ. of Oklahoma, Dept. of History (Norman, Okla., 1931); James Mooney, Calendar History of the Kiowa Indians, 17th Annual Report, BAE (Washington, D. C., 1898); R. N. Richardson, The Comanche Barrier to South Plains Settlement (Glendale, Calif., 1933); and A. B. Thomas, Forgotten Frontiers (Norman, Okla., 1932), also Teodoro de Croix and the Northern Frontier of New Spain 1776-1783 (Norman, Okla., 1941).

[113] [12] Comanche Plains culture is described by Ernest Wallace and E. Adamson Hoebel in The Comanches: Lords of the South Plains (Norman,

[p. 142-A]

194 The absence of a pattern of contrasting voiced and unvoiced phonemes (b-p, d-t) allows for a degree of latitude in pronunciation: d^{y} and g^{w} commonly occur as idiolectal variants of y and k^{w} respectively. Voiced consonants tend to assimilate to their phonetic environment. They become voiceless or only weakly voiced before voiceless vowels, weakly voiced following h (or aspiration), and fully voiced elsewhere.

194 In this paper Comanche is written as it is
195 spoken in deliberate speech. In ordinary
[128] conversation there is slurring, more elision, omission of final voiceless vowels, etc.[11]

194 All consonants except v and r occur in utterance initial position. The consonants v and r are defective in that they never occur in utterance initial position or after a pause in speaking. Further, they may alternate morphophonemically with p and t respectively at morpheme and word boundaries, although the conditions of alternation are not always phonologically determined; e.g., pa·kA *arrow*—nava·kA· *bullet* (its arrow); tïvo·pÏ *paper*—nïrïvo·pÏ *my paper*. t, but not p, always occurs after i.

All consonants occur in utterance medial position.

Only ʔ and h occur in utterance final, although in normal speech utterance final whispered vowels (see below) are often lazily pronounced and indicated only by the slightest movement of the speaker's lips, or they may be entirely omitted. In such instances the terminal phoneme is then heard as a consonant. Final Ï in such a word as tïhkapÏ *food*, is often heard as simple aspiration. Also, other consonants may occur
[192] finally in loanwords: waikin *wagon* (English); however there is a tendency for loanwords to conform to the Comanche pattern and acquire a final whispered vowel, e.g., papa·sI *potatoes* (Spanish, papas).

Consonant clusters are intersyllabic and

(113) [11] Julian H. Steward, Basin-Plateau Aboriginal Sociopolitical Groups, BAE-B, 120, p. 273 (1938); and D. B. Shimkin, Shoshone I: Linguistic Sketch and Text, IJAL 15.175-88, p. 175 (1949), note similar speed effects in Shoshone.

[p. 146-B]

193 *here*; ?inakwĭ?u? *it is on this side* (?i- + nakwĭ *side, direction* + ?u?).

[196] 3.8. Compounding is a morphological process defined as the juxtaposition of roots and/or stems to form new stems. These new compound stems may be inflected or stand as free words. Compounds may be composed of from two to four roots: ?ekahpa· *soda water* (red plus water); tu·ku·nA *coal* (black plus fire); pawovivu·kU *boat* (water plus board plus horse); piaro-sawovikni *big white wooden house*. Examples of compounds composed of root plus stem are: wanaciya·? *flag* (wana- *cloth* + ci- *with a stick*, an instrumental prefix + ya· *hold/up* + -? *nominalizer*); pihna·nohkopĭ *cake, cookies* (pihna· *sweet* + nohko *bake* + -pĭ *nominalizer*).

193 Among the most productive of compounded acculturation terms are a series of qualitative roots or stems (see the discussion of stem types below). These invariably precede noun stems in a compound. They

[128] are grouped below according to their syntactic position relative to each other:

193-196

I

pia-	*big*
pie-	*old, former*
tĭe-	*little*
ke-	*negative*

II

?isa-	*false, deceitful*
hu·-	*wood*
ca·-	*good, fine*
so·-	*many*
yu·-	*common, ordinary*

III

?eka-	*red*
?evi-	*blue, green*
?esi-	*grey, dull*
?eso-	*light in color*
?oha-	*yellow*
?otĭ-	*brown*
tu-	*black*
tosa-	*white*

[p. 150-A]

197 may be utilized; however, as form is the
192 most palpable aspect of a culture trait, formal equations have most frequently been made by the Comanche. Moreover, most Comanche extensions of meaning are in the realm of material culture where form is readily apparent. Extension of meaning is the method commonly used in naming new borrowings where there was an easily
197 recognizable native analogue. The same has been true for other American Indian languages, including those of the Wintu[55] and the Hupa. The latter called wheat flour by the same term as acorn flour, and potatoes after native bulbs.[56]

197 Naming equations solely on the basis of
192 function and symbolic meaning regardless of differences in form are comparatively few in Comanche. The following may be cited as examples:[57] *ǂpia?e·tĬ *gun (big bow)*; *ta·vE *clock, time of day (sun* compare ta·venItĬ *day)*; *ǂnava·kA *bullet, lead (its arrow)*.

A further example is the extension in meaning of the word puha *supernatural power* in the following: piavuharavenItĬ *4th of July (big puha day)*; *puharaivo·? *doctor, minister, Christian (puha white man)*; puharavenItĬ *Sunday (puha day)*; puharekIraivo·? *minister (puha talk white man)*; puharivo·pĬ *Bible (puha book, writing)*; *puhahuvia *hymn (puha song)*; puhaknI[58]

[113] [55] D. D. Lee, The Linguistic Aspects of Wintu Acculturation, AA 45: 435-440 pp. 435 ff. (1943).

[113] [56] H. G. Barnett, Culture Processes, AA 42: 21-48, p. 32 (1940).

[128] [57] Word lists will be given in the following alphabetical order: ?, a, e, i, I, o, u, p(v), t(r), k, kw, c, s, h, m, n, w, y.

[104] * Words marked with an asterisk appear in the Comanche vocabulary collected by Charles Detrich at Fort Sill, Oklahoma in 1805. Those marked ǂ appear in Randolph B. Marcy, Exploration of the Red River of Louisiana in the year 1851, 32d Congress, 2d Session, (Washington, D. C.; 1853).

[58] This same word was used by the Fort Hall Shoshone for a small structure used by the shaman in curing; Julian H. Steward, Culture Element Distributions: XXIII, Northern and Gosiute Shoshone, Anthropological Records, 8: 3, p. 273 (University of California, 1943). It was also used

[p. 219-A]

11: Casagrande E,L-5 (1940) 1954
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197 *church* (*puha house*); **suavevuharaivo·?** 192 *Catholic* (*cross puha white man*); tamavuharaivo·? *dentist* (*tooth puha white man*).

In similar fashion ?aca?vI, *supernatural*; *guardian spirit*, has been extended to include Holy Spirit, and miracle.

The use of puha with reference to both religion and doctoring possibly reflects the fusion of these two offices in aboriginal Comanche culture,[59] or at least a similar attitude towards both the religieux and the healer.

192 [128] [197] A representative list of words with extended meanings is given below.[60] The analogies are based chiefly on partial or more nearly complete equations of form, and frequently also of function. In many cases the original referent of the word is obsolete or obsolescent, as with the terms *wosA and *wihtua cited above, and today the new meaning is the primary one: ?ekahkwihce?E *electricity* (*lightning* [red flashing, or cracking like a whip]); ?ehkwe?ne? *butcher knife* (*sway-backed* [related to ?ehkwe?ne·tĬ *a swaybacked person*]); *?eksa·? *dye of any color, vermilion* (*red boiled*); ?ohahkuya·? *king* (*playing cards*) (*yellow carried on the head* [Eagle down feathers dyed yellow were worn in the hair by members of the tanisinĭ· band.]); ?ona·vI *salt in any form* (*salt*); ?oyo?rĬ *belongings, goods, wealth* (*belongings*); *paraivo·? *boss, leader, head* (*so-called peace chief*);[61] paco?E *fresh beef* (*wet*); *pahmU *tobacco in any form* (*tobacco*)

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by a Nevada group for a small enclosure figuring in a magical ceremony for antelope hunting; Julian H. Steward, Culture Element Distributions: XIII, Nevada Shoshone, Anthropological Records, 4: 2, p. 219 (University of California, 1941).

[59] This was apparently the case for Shoshone culture; Julian H. Steward, Culture Element Distributions: XXIII, Northern and Gosiute Shoshone, Anthropological Records, 8: 3, pp. 281-287 (University of California, 1943).

[60] Not all the vocabulary collected appears in the various word lists; however a large and representative cross-section is given.

[61] See E. A. Hoebel, The Political Organization and Law-Ways of the Comanche Indians, MAAA No. 54, pp. 18-20 (1940).

[p. 219-B]

192 sources of the latter type in English.[11]
197 These fashions are foreign to Comanche; however a pattern for onomatopoetic formations seems to exist (e.g., wo?woki- *bark*; tí?ĭ· *killdeer*; civivĭ· *chickadee*), and the language has added a small number of these forms to its relatively limited number of roots: *ta?wo?i? *gun, rifle* (doubtful); koka? *guinea fowl*; ko·ko? *chicken*; *ko·korá?a·? *rooster, chicken*; *wa?o·[12] *cat*.

New analyzable words, on the other hand, are exceedingly abundant in Comanche. These are usually descriptive of the new traits, or embody some observation or attitude towards them. While the analysis of
191 most words is quite transparent, this was not always immediately apparent to the native speaker himself who often evinced surprise at realizing the etymology of a word he had never thought about in these terms before.

193 The presence of the set of instrumental
197 prefixes and the pattern of their frequent use has led to the description of many new items,
192 and especially machines and implements, in dynamic terms rather than in static ones of color, shape, and size. Further, the formation of words by incremental affixation
192 [193] allows a considerable degree of subtlety and accuracy of description which is succinctly expressed in many of the new coinages:[13] pacahto?i? *pump (raise water forcefully with the hands)* [pa- *water* + cah- instrumental + to?i *rise, go up* + -?, nominalizer]; ku?mito?ai? *pop-corn (turned inside out by heat)* [ku?- *by heat* + mito- *inside out* + ?ai *go* + -?, nominalizer]; nara?aikĭ? *bicycle (make one's self go with the feet)* [na-, reflexive + ta?- *with the feet* + ?ai *go* + -kĭ, causative + -?, nominalizer];

[113] [11] E. H. Sturtevant, An Introduction to Linguistic Science, pp. 120 ff., and 127 ff. (New Haven, Connecticut; 1947).

[12] Robert G. Latham, Elements of Comparative Philology (London; 1862), says that there was then no word for cat.

[128] [13] In these and the following examples the literal translation is enclosed in parentheses, and the analysis, where given, is in square brackets.

[p. 222-A]

are easily transposed. English vowels are heard by Comanche in their cardinal positions and are readily transmuted into their Comanche equivalents: ɪ to i, ɛ to e, æ to a, ɔ to o, ʌ and ə to ĭ, etc.

There is a tendency for loanwords, especially those of an earlier vintage and in general currency, to conform to Comanche patterns of phonetic distribution described in 3.1. Consonant clusters are often reduced to a single consonant, or transmuted to the Comanche form of h or ʔ plus consonant, and borrowed words also tend to terminate in aspiration, a glottal stop, or a whispered vowel.

Phonetic transmutation may often be of considerable help in dating both the introduction of a new word and the trait to which it refers. Older borrowings tend to become more closely assimilated to the native phonetics. Thus, Trager in a study of loanwords in Taos, the language of a Pueblo tribe, expresses the opinion that the words which depart most radically from the original Spanish may be considered the oldest loans.[112] Spencer makes the same point with respect to the use of Spanish by the Keres.[113] He also notes that, "In the forms which are presumably older, considerable irregularity in sound shift from Spanish to Keresan is apparent".[114] The same general tendencies may, I believe, be observed in Comanche where earlier loans, i.e., those noted by Detrich in 1895 and marked with an asterisk [128] in the lists which follow, seem to diverge more markedly from their original Spanish pronunciation. Following this, and even in the absence of confirmatory historical evidence, we would assume that such Comanche loanwords as kavirĭ·ʔ and poʔroʔ from Spanish, and paisé·ʔ and wo·sitĭn from English are of earlier introduction. It should be

[113] [112] George L. Trager, Spanish and English Loanwords in Taos, IJAL 10: 144-148, p. 145 (1944).

[113] Robert F. Spencer, Spanish Loanwords in Keresan, SJA 3: 130-146, pp. 132-133 (1947).

[114] Robert F. Spencer, Spanish Loanwords in Keresan, SJA 3: 130-146, p. 133 (1947).

[See p. 146-A--Analyst.]
[p.229-A]

197 noted, however, that Comanche phonetics
194 correspond more closely to Spanish than
192 English phonemes.

121 Occasionally where there has been a long history of contacts, the same sounds have been consistently transmuted into different native phonemes at different historical periods. This has been true for the Yaqui where such phonetic clues have been useful as an aid in allocating Spanish words to the probable period of their introduction.[90] The same holds for Oneida which has borrowed rather extensively from English for several centuries.[91] Here older borrowings were fitted more stringently into a rather fixed pattern of phonetic equivalents which has been somewhat relaxed for later loans.

192 While Comanche pronunciation of loan-
194 words, especially those of more recent origin,
197 varies depending upon the speaker's knowledge of Spanish or English, the words listed below are spoken unselfconsciously AS IF they were native forms and are an integral
128 part of the Comanche language. All the examples collected are given and it is felt that the list is virtually complete.

192 With the Spanish model in parentheses: pa·nI[92] pa·nU *white bread, store bought loaf* (pan); pa·pasI *potato, potatoes* (papas); *pihú·ra?[93] *beans, peas* (frijoles); *pihnú·?[94] *sugar, candy; sweet* (panocha); *po?ro? *pig; bacon* (puerco); *tohtíya? *wheat; bread of any kind* (tortilla); to·rosi? *cattle* (toro +

[90] Edward H. Spicer, Linguistic Aspects of Yaqui Acculturation, AA 45: 410–426, pp. 420–423 (1943).

[91] Floyd Lounsbury, Personal Communication (1941).

[197] [92] Southern Paiute, a language closely related to Comanche, has made the same loan from Spanish and has added a whispered vowel: pa·nA. Edward Sapir, Southern Paiute Dictionary, Proc. of the Amer. Academy of Arts and Sciences, 65: 537–730, p. 600 (Philadelphia, Pa.; 1931).

[113] [93] Ralph V. Chamberlain, The Ethno-botany of the Gosiute Indians of Utah, MAAA Vol. II, Part 5, pp. 329–406, p. 373 (1900) gives pi-o-ra as a term for everlasting pea in Gosiute. The Comanche term may be an extension, or both may be loans from Spanish.

[94] See footnote 62.

[p. 229-B]

11: Casagrande E,L-5 (1940) 1954
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197 rowing has gone on between Kiowa and
[128] Comanche. The examples of new Kiowa words which are given below are chosen for their similarity to Comanche acculturation terms.

Kiowa has extended old meanings to apply to such traits as pencil, glue, clock, house, chewing-gum and horse. It uses a modifier, meaning *real*, to distinguish between native and new traits just as Comanche uses *White man's* and *Indian's*. Thus, *real spoon* refers to one made of buffalo horn; a *real necklace* is one made of long bone beads; *buffalo* are *real cattle;* and *real sinew* means *sinew* rather than *thread*. Many new descriptive words such as those for *whiskey, doctor, Sunday, vinegar, telegraph, automobile, fishhook, peach, beer,* and *pump* are exactly equivalent to the Comanche words for these things. And Kiowa, as Comanche, has borrowed *agent, agency, commission, five cents* and *two bits* from English.

128 Several segments of the Comanche acculturation vocabulary, namely words pertaining to religion, diseases, playing cards and time and measure, will be presented in the pages to follow. These are selected as both interesting parts of the vocabulary and as examples of the amount of new vocabulary that has been added in representative areas of culture affected by White influences. Other sub-vocabularies such as those for foods and implements would, of course, bulk larger in the total vocabulary. While new descriptive compounds predominate, a few meaning extensions and loan-translations are also listed. Aside from a few minor omissions and words entered elsewhere in this paper, the lists are in all

[124] Charles Detrich, Comanche Vocabulary Collected at Fort Sill, Oklahoma, manuscript on file at BAE (1895), notes a related word containing *tu·kwasikatĭ black, has a tail.*

[125] In this and other words in which *taivo·?* is used it is perhaps better translated as *man, other than Indian.* It invariably denotes belonging to an alien way of life.

128 likelihood relatively complete and contain most of the words collected.

192 RELIGION: ʔáikurahánipĭ *sin* (*bad deed*); ʔá·hkatĭ kehínarokwehání·tĭ *devil* (*got horns, doesn't do anything right*); puhaniwĭnĭnA *religious camp meeting* (puha *supernatural power* + niwĭnĭ- *speak to a group* + -nA, verbal suffix); tá?ahpĭ?a tékwapha rúawe·tĭ *sermon* (*telling God's word*); tá?ahpĭwakatu kwíco?aipĭ *redeemed* (*saved by God*); tapí·hivin *communion* (*drinking blood*); tatohtíyarihkan *communion* (*eating bread*); tapó?sahanipĭ *sin* (our crazy deed); tasó·patko?ive? *The Flood* (*when many were drowned*); *tanávawihtia?e·nA *baptism* (*water poured on one*); tanárimi?ayĭcĭ? *resurrection* (*Our Master flew*); tanárimi?ma?ai yíka?etĭ· *disciples* (*those who go with Our Master*); tinihnĭkepĭ *parable* (*illustrate by talking*); tomova?atĭ *Heaven* (*on top of the sky*); tu·kwasitaivo·?[134] *devil* (*black tailed White man*); *kasaraivo·?[135] *angel* (*winged White man*); ku?enavawihti?apĭ *Methodists, Presbyterians and other Protestant denominations that sprinkle baptismal water on the head* (*water poured on top*); sokorohkatĭ pikhĭnawéhanA *Hell* (*under the earth, place of fire*); suavevuhavaraivo·? *Catholic priest* (*Catholic leader*) (4.1) suavema tanárimi?a tatáwĭna? *Crucifixion* (*on the cross Our Master nailed*); nahnsuthaipĭ *prayer* (*name bless*); *navawihtiapĭ *Christian* (*water poured on*); nahnsuwíkai? nahapĭ *miracle* (*wonderful happening*); namaváku?nepĭ *Baptist* (*immersed in water*); nĭmisúthai *have mercy on us!* (*pity us!*).

DISEASES: ?amawihmina? *pneumonia* ([newer word, see below] *side sickness*); ?eviwihmina? *flu* (*green sickness*); ?ekarasi?A *measles* (*red spots*); ?ohahuhcĭni? *yellow fever, typhoid* (?oha- *yellow* + kuh- *by heat* + cĭni *soak through* + -?, nominalizer); ?o?ni? *tuberculosis, cough* (?), see ?o·?I *to vomit*); pahowihmina? *tuberculosis* (*fatigue sickness*); pihiwihmina? *heart disease* (*heart sickness*); pihná·wihmina? *diabetes* (*sugar sickness*); pisipĭ *venereal disease* (*gangrene, or any pus infection; rotten flesh*);

[p. 235-B]

198 stated, is probably that the conditions under which these forms of speech flourish
198 were absent. A relatively stabilized tangential relationship between a dominant and
648 subordinate people as between master and slave or servant, missionary and convert, or trader and native seems necessary for the formation of a pidgin or creolized language. Such a relationship never held between the Comanche and Whites for any length of time and no true pidgin ever developed.

197 Comanche is a dying language. It is being
191 steadily eclipsed by English which today has a new and relentless prestige. Another
177 50 to 75 years may see Comanche cease to function as a living language. The constant contact with Whites, the teaching of English in the schools and, due to the fact that the Comanche live on scattered allotments, the lack of an integrated community or tribal life comparable to that of the Pueblo or Reservation tribes, are all factors in the evanescence of the language. English is the language of the dominant culture, the language through which one gets on in the world by means of widening social, economic
197 and political contacts. Though it is doomed,
177 the language is far and away the most vitally functioning part that remains of the old Comanche culture. Other traits are gone, empty and broken forms, or compromises with the new. Comanche today affords ample evidence of the flexibility and tenacity of language in the face of pressure from a dominant culture.

121 6.0. Personal names, along with kinship terminology,[148] represent a segment of culture where custom and language are virtually inseparable, and it seems especially appropriate in a study of linguistic acculturation to describe the effects of contacts with Western culture on Comanche
128 personal names. To provide a basis for comparison between the old and new practices,

[148] Thomas Gladwin, Comanche Kin Behavior, AA 50: 73-94 (1948) discusses Comanche kinship terms.

[p. 243-A]

128 a brief ethnographic account of the old naming customs will first be given.

553 6.1. Comanche personal names were bestowed in a variety of ways and frequently in rather casual fashion. In rather sharp contrast to our practice, a person could in his lifetime successively bear several different names, or be known by several different sobriquets at any one given time.

551 Little distinction was made between male and female names, although some plainly did refer to male or female characteris-

[553] tics. Women's names, however, tended to be more permanent.

While almost from birth an infant could be called by a pet name or nickname which was often kept until adolescence, a child could also simply be called by the word for *boy*, pihia?, or *girl*, nai?A. It was not uncommon for a person to be called by a status term designating age and sex, or by a kinship term, in lieu of his personal name.

553 However, a youngster would usually receive a given name in early childhood, although one informant stated that he was not given such a name until he was ten

551 years old. A child's parents in modest

[553] ceremony would customarily call in an elder or two to relate stories and choose as a name some word descriptive of an incident or character in the tale. A name could also come from some incident in a person's life which subsequently came to be associated with him.

In some instances a child was named after a parent, relative or other person, but because of the taboo against using the name of a dead person, only if he or she was still alive. Or, alternatively, a boy could, in familiar European fashion, be called "son of so and so". Only in the latter case was there anything comparable to the use of paternal surnames.

553 Nicknames derived from physical peculiarities or temperamental idiosyncrasies

551 were frequently bestowed and could be given at almost any point in the life cycle from babyhood on. In line with the insti-

[602]

[p. 243-B]

11: Casagrande E,L-5 (1940) 1954
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551 was Tittarritsa Namiquau from tütarihci? *wee little one*, and namakweyui? *one who strips himself*. The former was her own given name, the latter was her father's name. The Josie was acquired sometime after she had received her Comanche name, possibly at school or upon her marriage.

As near as can be determined from the rolls there are some 37 instances where the Christian name of a woman is not recorded until her marriage. The average age of these woman is approximately 47 years. One more example might be given: Clou Pakahwy, pa?kahwi? *one who throws an arrow*, is the married name of a woman of 52 whose maiden name is listed as [illegible] Permamsu from tu·wiká·? *crow*, and pihimahmsu? *one who rejects a bunch of hides*, her father's name. The Clou is a Comanche mispronunciation of her own given name, Crow, translated into English.

551 177 Since no person over 41 is listed on the census rolls as bearing only a Comanche name, presumably the shift to the new naming system was effected by 1900. The [128] accompanying table shows in some detail the rate of change through the years it spanned. Although the sample is small, the asymmetrical rise in the per cent of persons having Comanche given names at the age-interval 65–69 years probably reflects the turbulent conditions of the years 1871–75. These were years of unrest just preceding and during the confinement of the Comanche to the Fort Sill Reservation; years marked by the last raids and fighting with the Whites, and by an abortive messianic outbreak in 1873.[147] It is also apparent from the table that the women lagged considerably behind the men in acquiring the White system of onomastics.

At the present time the pattern of using given first names derived from American models and family surnames is in full sway. 551 The family names are for the most part derived from the male line, usually from the

[147] E. A. Hoebel, The Comanche Sundance and Messianic Outbreak of 1873, AA 43: 301–303 (1941). [113]

[p. 245-B]

11: Casagrande E,L-5 (1940) 1954
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551 (Pierce?), Shannon B., Simon, Woodrow Wilson, Wyvale. Feminine names offer the following: Audrea, Balinda Mary, Cleo Marcelle, Dixie Diane, Ernestine Marie, Freddie Joe, Garnet, Hattie, Laurania Peral, Leila Viletta, Luvenia Yvonne, Mandy Louise, Marilyn Panzie, Marrel F., Mollie, Sybil, Nettie Belle, Philomena Marian, Prudence, Ruby, Sharon Vivonne, Sonia Youmaine, Tinnie, Udee, Una, Winona and Zelia.

551 177 Thus, we have traced the acculturation of one aspect of Comanche culture, personal names, from the old pattern described above to the whole-hearted adoption of the local
551 178 Southern White naming patterns. There is little left of the old, except perhaps in the great individuation of given names. The actual circumstances of the giving of first names may show a few faint traces of the
551 177 old customs, but even that is doubtful. The degree of acceptance of the new naming practices may be taken as a rough index of the participation of the Comanche in the
551 177 178 culture of the Whites. The older, relatively less acculturated Comanche still bear individual names, while the younger generations have adopted the White pattern to the extent that the old way has entirely yielded place to the new.

128 **7.0.** Thus far the major portion of this paper has been devoted to the first of two objectives—a description of the effects of culture contact on the Comanche language, chiefly the lexicon. The balance of the paper will be addressed to the second objective, namely, an attempt to demonstrate the utility of these linguistic data for the student of acculturation and culture change. Some general observations based on an appraisal of the total acculturation vocabulary will first be given. There will then follow a set of postulates on language with special reference to culture change and a series of propo-

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given name is not infrequent in Oklahoma, but this is the only case for the Comanche.

[p. 251-A]

128 sitions designed to relate specific linguistic data to the social, cultural, and historical facts of which they are diagnostic.

177 197 177 121 554 191 177 192 197 177

7.1. On examination of the Comanche occulturation vocabulary as a whole it is quite evident that the preponderance of new terms are those for material aspects of White culture. While it cannot be assumed that Comanche knowledge of White culture is restricted to those traits for which the language provides unitary terms, this fact bespeaks greater familiarity with the tangibles of Western culture than with non-material traits. Nor is this surprising, as the things of daily use tend to be the first part of one culture to be both presented to and accepted by another culture. Moreover, material culture does not necessarily require a spoken introduction to a borrowing people. Non-material or intellectual culture, on the other hand, is essentially transmitted through the medium of language, and such knowledge, unless it is sheer mimicry, must necessarily be translated from one language into another through the good offices of one, a few, or many bilingual speakers. It is probably unrealistic to expect that any significant corpus of alien intellectual culture, especially that of an esoteric nature, will be incorporated into a borrowing culture or accommodated by its language unless it is espoused by some special class of persons such as scholars, priests, rulers, or artisans who occupy positions of some prestige or power. Status groups such as these were non-existent in Comanche culture, and it is significant that those Comanche most conversant with Western intellectual culture also know English best and use English in discussing these aspects of Western culture.

The words added to the vocabulary are almost entirely nominal forms. Adjectives, adverbs, and verbs, except as these may be derived from nominal forms, are conspicuously absent and words for abstract concepts such as science, government, machine, etc., are rare. The religious terminology

[p. 251-B]

11: Casagrande E,L-5 (1940) 1954
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197 peting language, were added prior to the
192 turn of the last century.

7.2. In the interest of conciseness the
128 numbered statements which follow are phrased as a series of postulates, a device suggested to the writer by one of Bloomfield's papers.[113] Some of these postulates attempt to make explicit certain assumptions about language which are basic to this paper, while others state general observations on linguistic change, especially those changes induced by culture contact.

121 1. Language is a part of culture and, in its semantic aspects, symbolic of culture.

2. Change is a normal linguistic process which is not autonomous but attributable to psychological, social and cultural causes.[114]

3. The rate of linguistic change is variable and may be affected by both linguistic and extra-linguistic factors. Among the latter, some of which may also operate in initiating change, are the size of the speech community; types and extent of use of mass communication media; literacy; relative prestige of competing languages or dialects; degree of bilingualism or multilingualism; type, intensity and duration of cross-cultural contacts.[115]

4. Linguistic change is a part of total culture change, although these changes are not necessarily coextensive or parallel.

5. Because language is, in part, symbolic of culture, linguistic changes may reveal culture changes whether the latter stem from culturally internal or culturally external sources.

6. Culture contact may induce changes in both the formal and semantic aspects of language.

7. Formal changes may arise: externally, due to the direct influence of a foreign

[113] [113] Leonard Bloomfield, A Set of Postulates for the Science of Language, Lg 2: 153-64 (1926).

[114] Harry Hoijer, Linguistic and Cultural Change, Lg. 24.335-45 (1948).

[115] Uriel Weinreich discusses both linguistic and extra-linguistic factors in language change in his book, Languages in Contact: Findings and Problems (New York, 1953).

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12: Canonge L-5 (ca. 1950-1955) 1958 NO6 Comanche NO6
Oklahoma

Editor's Note

128 Comanche Texts is designed to be useful to the widest possible audience. The English translation is keyed to the Comanche by means of subscript numbers so that the texts can be used by the linguist without more than occasional reference to the stem list in the appendix. Parentheses are used in the English translation where there is no direct Comanche equivalent for the word. Virgules indicate that the word occurs in Comanche but can be omitted in the translation for a smoother English reading. Square brackets occur around words which explain a preceding word or phrase.

The English translation is intended to be free enough to be read easily, but sufficiently awkward to give the reader something of a Comanche "flavor".

12: Canonge L-5 (ca. 1950-1955) 1958 NO6 Comanche NO6
Oklahoma

128 Canonge's translations, though simply presented, show the fruit of patient research into the manner of word formation, characterized in Comanche by a rich use of affixes and of stem composition, while still maintaining a fairly simple inflectional apparatus. Some of the facts were already worked out for Comanche and for closely related languages (e. g. Southern Paiute) before Canonge began his work, but he still had much to do to reach his present fine understanding of Comanche structure and the meaning of each element. He supplemented his general knowledge of the language by careful study of his texts, with the help of Mrs. Riddles and other natives.

The author is to be congratulated on his technique for showing the relation between the native text and the translations. He uses numbers for each word in the native text and marks with the same number the part of the translation corresponding to each native word. This gives a good correlation of the two texts without making the publication impossibly expensive, as is the use of interlinear translation. The linguistically skilled reader, by consulting some of the published work on the structure of Comanche or related tongues, will be able to analyze the material with relative ease; naturally the untrained reader will need more patience to follow the structure but not more than he would need with interlinear translation. A possible criticism is that the literary style of the translation is at times a bit clumsy for trying to parallel the native version strictly.

Canonge uses brief summaries rather than short-phrase titles to the texts.. This will be welcomed by the folklorist concerned with finding "folk-theme" parallels between Comanche and other mythologies, and by the general ethnographer looking for data on particular aspects of Comanche customs. The material is classified into parts, including: Coyote stories, Fairy tales and fables, Humor in ridicule, Manners and morals, Adventure, Obtaining and preparing food.

It is to be expected that the majority of readers will be interested in the content rather than in the specific linguistic form of these texts. They will be able to read right along, simply disregarding the little numbers used for showing the analysis. The latter will be important to the linguist and the student of native story-telling style.

492 In historic times, the Comanche distinguish themselves
175 as one of the tribes which was quick to adopt the use of the horse, becoming accomplished riders, and using this rapid means of movement to hunt the buffalo and in exploits of war.

14: Riggs L-5 (1948) 1965 NO6 Comanche NO6
Oklahoma

000 ALTERNATE PHONEMIC ANALYSES OF COMANCHE

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0. Introduction
1. Consonants: Analysis A
2. Consonants: Analysis B
3. Discussion
4. Vowels
5. Stress

128 0. This paper presents two alternate phonemic analyses of the consonants of Comanche, a Uto-Aztecan language.[1] The 128 question involved is whether the sequence h 194 plus consonant should be regarded as a consonant cluster or as a unit phoneme in 128 this language.[2] In section 3 the relative advantages and disadvantages of each solution will be discussed without any attempt to favor either analysis. The writer, however, prefers analysis B.

128 1. Consonants: Analysis A. In this analy- 194 sis the sequence h plus consonant is interpreted as a consonant cluster.

194 1.1. Stops and spirants generally occur in unique allophones, namely voiceless; h is assimilated to preceding vowels and following nasals.

Stops: p, t, c (an affricate, patterning as stop), k^w, k, ʔ. Examples: paa *water*, picipə *milk*, toaʔ *son*, peetə *daughter*, caatə *good*, paciʔ *little sister*, k^weeniʔ *pointed hill*,

[101] [1] The data on which this paper is based was gathered during the 1948 session of the Summer
[115] Institute of Linguistics at the University of Oklahoma. Comanche informants were Molly Weryavah, Emily Riddles, and Mrs. Joe Harry. I am indebted to C. F. Voegelin for suggestions in the presentation of the material.

[2] A third possible analysis, that of interpreting preconsonantal h as a voiceless vowel has not been considered due to the fact that Comanche voiceless vowels are contrastive as to quality, while the phoneme h is not. See section 1.1., Spirants.

194
[128] In this analysis the sequence h plus consonant is interpreted as a unit phoneme, i.e. a preaspirated consonant.

2.1. Consonants which show an opposition of preaspirate versus simple are certain stops and continuants. The stops always appear voiceless; the preaspirate continuants are only slightly voiced, the simple continuants are voiceless before voiceless vowels, voiced elsewhere.

The stops are:

Preasp. ʰp, ʰt, ʰc, ʰkʷ, ʰk

Simple p, t, c, kʷ, k

Examples: ʔaʰpaʔ *father*, kaʰpeʔ *bed*, ʔəʰtui- *to give (sing.)*, moʰtoʔA *pimple*, tuneʰci- *to run*, paʰcikeetə *slick*, yaʰkʷi- *to say*, tənəcaʰkʷeyaʔi- *to skin*, təʰka- *to eat*, naʰkia *maybe*, pahaʔ *aunt*, tamiʔ *little brother*, caatə *good*, kʷiipə *smoke*, kakuʔ *grandmother*.

The continuants are:

Preasp. ʰm, ʰw, ʰn, ʰr

Simple m, w, n, r

Examples: naʰmeitə *table*, kaʰnI *house*, taʰniʔikI- *to put (with plural object)*, wokoʰwiʔ *squirrel*, puhiʰwI *money*, noʰrənapI *bed*, ʔuʰri- *third person obj. dual*, marəaʰweʔ *greeting*, waʔooʔ *cat*, naramaʔipA *story*, karərə *sitting*.

2.2. Remaining consonants are those consonants in analysis B which do not show opposition of preaspirate versus simple. Their allophones are as described under analysis A.

Stop: ʔ. Examples: miʔarə *going*, ʔaraʔ *uncle*.

Continuants: ʀ, s, y, h. Examples: ʔonaʀiʔ *salt*, muʀipóroʔ *pig*, saʀiiʔ *dog*, sahopA *broth*, yəʰkʷi- *to say*, təhəəyA *pony*, haicI *friend*, pahaʀitə *swimming*.

2.3. The distribution of consonants under analysis B is as follows:

All consonants occur in utterance medial.

All simple (i.e. non-preaspirate) consonants except ʀ and r (as explained in section 1.3.) occur in utterance initial.

Only ʔ and h occur in utterance final.

There are only three consonant clusters.

[p. 230-A]

194 *red*, hayarok"EtI *four (as used in counting)*, sahopA *broth*, səəmanUrii *ten (used as object)*, mo?O *hand*, təkəɒnitə-nə? *I keep on eating*.

The distribution of the vowels is as follows:

All vowels occur in utterance medial.

Only voiceless vowels and vowel clusters occur in utterance final. When a morpheme with a final single voiced vowel occurs in utterance final position its final vowel is replaced by a voiceless vowel of corresponding quality.

Only voiced vowels occur in clusters. These are of two members, which may consist of identical or diverse vowels. All voiced vowels occur in identical clusters. Examples: tiipE *mouth*, k"eeBi? *pointed hill*, caatə *good*, kooBe? *face*, huupI *tree*, pəərA *arm (wrist to elbow)*. The following clusters of diverse vowels have been observed: a, u, e, o followed by i. kasaráiBo? *angel*, pui *eye*, na'meitə *table*, kook"a?ənoi *egg*, i, ə, o followed by a. piapə *big*, təasə *again*, moakU *hole*. ə, a followed by e. nəetə *wind*, pae *water (obj.)*.

128 5. In the examples given above stress is unmarked when it falls on the first syllable of a word; in all other cases it is marked

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few more consonant clusters, but these are much less frequent in occurrence than the type h plus consonant, with which we are concerned.

[p.231-B]

15: Osborn & Smalley L-5 (1948) 1965 NO6 Comanche NO6
Oklahoma

FORMULAE FOR COMANCHE STEM AND WORD FORMATION

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0. Introduction
1. Affix check list
2. Stem formation
3. Stem classes
4. Word formation

128 0. In this paper we discuss Comanche stem and word formation. The formulae utilized to represent the observed constructions grew out of an attempt to handle the cross-cleavage between stem classes and word classes. Although not all possible combinations of formational and inflectional elements have been found, this method of statement by formulae can be expanded to include any new combinations recorded.

193 Stem classes are characterized by their potential distribution with alternants of suffix 311, but are not identifiable by any feature of internal structure. Word classes are characterized by their potential syntactic distribution, and when inflected are identified morphologically by their final suffix (see 4).

193 128 1. Affix check list.[2] The following list is representative of the most commonly used

[101] [115] [128] [1] Data for this paper were gathered in the 1948 session of the Summer Institute of Linguistics at the University of Oklahoma. Comanche informants from Walters, Oklahoma, were Molly Weryavah, Helen Seahmer, and Emily Riddles. We are indebted to the staff of the Institute, particularly to Elliott Canonge and John B. McIntosh for technical information on Comanche, and to William L. Wonderly for advice in the presentation of the material.

[194] [104] [2] The phonemes of Comanche are analyzed as follows: p, t, k, k^{w}, ʔ; c; s, š, h; m, n, r; w, y; i, I, e, E; ɨ, Ɨ, a, A; u, U, o, O. Large caps represent voiceless vowels; small cap B represents bilabial v. Stress /'/ is written immediately preceding the stressed syllable. Hyphen (-) represents morpho-

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128

affixes in Comanche. Some classes of affixes are not exhaustive (e.g. derivational affixes, class 100, which includes many more morphemes), but the pertinent classes for stem and word formation are represented.

Classification of affixes by centuries is as follows: 100 derivational, 200 verbal inflectional, 300 nominal inflectional. Classification by decades is generally on the basis of relative order. However, morphemes 201, 253, 254, 323 have been classified otherwise for convenience of description since their relative order is not as pertinent as their identity with the group in which they are placed. Decimal numbers indicate mor-

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193
194
[104]
[128]

logical juncture where clitic stems are bound to other stems or words (see 3.1.3., 3.1.4., 3.3.).

The recurrent morphophonemic changes are as follows: (1) Single morpheme-final vowels generally become voiceless in utterance-final position. 'kahninII *houses* > 'kahnI *house*.

(2) In certain combinations morpheme-final vowels reduce to open transition of neutral vowel quality. In certain combinations morphemes reduce medially by the loss of one or more morae. Compare 'tIhka *eat* in the following: 'tIhkaru?i-nI? *I will eat*, 'tIkɒInitu?i-nI? *I will always be eating* (['tIkʰɒInitu?i-nI?] in which [kʰ] is approximately [ki] but without vowel mora); 'puukU *horse* + 'kahnI *house* > 'pukuknI ['pukukᵏNI] *barn*.

(3) t interchanges with r; and p interchanges with m, utterance medially at morpheme boundaries under conditions not always phonologically determined. 'pani? *older brother*, nI-'sani? *my older brother*; 'tIɒorI-ma? *he is writing*, 'caa-nI? 'rIɒorI *I write well*. After pause the p and t always occur: 'tenahpI?a 'rInikʷIri-nI? 'suni? *I see the man singing*, but 'tenahpI?a / 'tInikʷIri-nI? / 'puni? (in which / indicates tentative pause). t (but not p) always occurs after i. '?itI *this one* < ?i 3rd person close + -tI nominalizer; '?orI *that one* < ?o 3rd person distant + -tI; 'piniapIrII *large ones* <'piapI *big*.

(4) ? + ? = ?. 'sarii? *dog* + -?a genitive > 'sarii?a *dog's*.

[p. 93-B]

193 pheme alternants. Distribution classes of
128 stems and affixes are defined below.

Reference to affix classes is made in even century and/or decade numbers (e.g. reference to tense is made by 260). Reference to specific morphemes is made by the list number (e.g. reference to -tu?i future, is made by 261). The distribution of alternants in respect to each other is indicated in the list.

193 Class 100: 110, 120 1st and 2nd order derivational prefixes respectively; 130 derivational suffixes.

111. ca?-[3] *with an upward movement of the hand*
112. ma?- *pertaining to the hand*
113. ro?- *with a violent movement of the hand*
114. co?- *with the head*
115. ki?- *with the elbow*
116. hu?- *with the back*
117. ta?- *with the leg or foot*
118. kĭ?- *with the mouth or scissors*
119. ci?- *with something sharp*

121. na- reflexive

131. -pĭ[4] nominalizer
132. -? nominalizer
133. -pI[4] classificatory affix
134. -pI? classificatory affix
135. -BI classificatory affix
136. -ci? classificatory affix

Class 200: 201 infix; 210–250 verbal suffixes in relative order by decades.[5]

201. -*V*-[3] imperative → (distribution restricted to an arbitrary class)

[3] Morphemic alternation of affixes in class 110 is not completely analyzed. Each affix in this class has an alternant with final h instead of final ?.

[4] Classificatory affixes here listed do not make any determinable difference to the root. That they are derivational affixes, however, is shown by the fact that they are generally lost from R in the formula R + S = S.

[104] [5] *V* is used here and in morpheme 321.1 as a morphophonemic symbol for a lengthening of a single vowel to two morae.

[p.94-A]

193 mum observed number of roots in any combination is four: 'piarosawoɴikni *big white house* < 'pia- *big* + 'tosa- *white* + 'woɴi *wooden* + 'kahni *house*). Examples: 'pukuknI *barn* < 'puuku *horse* + 'kahni *house*; '?esiwanah *gray blanket* < '?esi- *gray* + 'wanah *blanket*; 'tïkʷïkʷitu?i-?urïkʷĭ *they* (dual, distant) *will sit down to eat* < 'tïhka *eat* + yïkʷi *sit down* (non-singular); 'tïrïehpï?rïï-ca? ma-'ɴiacahora?I *the children dug out a deep hole* (*with hand*) < 'pia- *big* + 111 + -hora *dig*; 'puica?nika? *eye glasses* < 'pui? *eye* + 111 + -nika? *push into*; 'koɴenaɴoopĭ *portrait* < 'kooɴE *face* + 121 + 'poo *draw* + 131; nï-'ɴia?-ca? 'pianacahki?a?I *my mother scratched herself deeply* (*with something sharp*) < 'pia- *big* + 121 + 111 + -ki?a *scratch*; 'nïmïkʷa?ihpï? *Indian woman* < 'nïmï *Indian* + 'kʷa?ih- *woman* + 134; '?eso?ekaɴItĭ *pink* < '?eso *not quite ripe* + '?eka- *red* + 135.

193 3. Stem classes. The above stems are divided into distributional classes S^a, S^s, S^p,
128 on the basis of potential occurrence with alternants of 311. Stems as such are not equated with words.

193 3.1. S^a may take alternants 311.1 or 311.2, with the formal sub-classes S^q, S^v, S^s, S^{pr}:

3.1.1. S^q (qualitative stems) take 323. They are inflected for future according to the formula S^q + 241 + 251. '?eɴIɴI *blue* + 311.1 > '?eɴIɴItĭ *blue, blue one*; '?eɴIɴI *blue* + 241 + 251 > '?eɴIɴIyutu?i-marïï *they will be blue* (-marïï 3rd person plural close).

The initial syllable of stems beginning $C_1V_1C_1$- reduplicates with 323 in two patterns: $C_1V_1C_1V_1C_1$- and $C_1V_1hC_1V_1C_1$-. 'huyunihtĭ *cylindrical* > 'huhuyunihtïkʷĭ *cylindrical ones* (dual); 'tïtaatï *little one* > 'tïhtïtaatïkʷĭ *little ones* (dual).

Some S^q show morphophonemic reduction when occurring with 323, with some initial $C_1V_1C_1$- becoming stem-initial -C_1C_1- when occurring with 323 (see fn. 2). 323 +

[p. 96-A]

16: Smalley L-5 (1949) 1965 NO6 Comanche NO6
Oklahoma

PHONEMIC RHYTHM IN COMANCHE

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0. Introduction
1. Rhythm
2. Lexically placed stress
3. Interpretation of vowel length
4. Conditioning of intonation
5. Gradient differences

0. At least two points of theoretic interest are revealed by an analysis of Comanche prosodic features.[2] The first of these is that there are rhythm patterns which are arbitrary and contrastive, and which to a degree at least carry emotional affect. They may also possibly be associated somewhat with grammatical sentence types.

The second point of interest is that Comanche shows no structured system indicating affective situations by contrastive intonational pitch contours such as occur in English and many other languages. Affective situations are indicated to a small degree by

[1] The research for and preparation of this paper was accomplished while the author was a guest instructor in linguistics at the Summer Institute of Linguistics at the University of Oklahoma in 1949. Credit is due to the Institute and to The Christian and Missionary Alliance for making this project possible. Data were collected on a tape recorder, with Mrs. Emily Riddles, of Walters, Oklahoma, as the main informant. Materials were checked, and conversation recorded with the help of several other informants. Special thanks are due to Kenneth L. Pike for suggestions and criticisms, and to Elliott Canonge for checking some of the analysis of intonation presented here. Parts of this paper were presented with recorded examples at the summer meeting of the Linguistic Society of America at Ann Arbor, Michigan, in July, 1949.

[2] Prosodic features are here defined as quantitatively significant phenomena. In Comanche these include phonemic stress, rhythm, and length, and non-phonemic pitch. This definition follows Kenneth L. Pike on 'suprasegmental phonemes' in Phonemics: A Technique for Reducing Languages to Writing, Ann Arbor, 1947, p. 63a.

194 such pairs as ¹ʔurĭ *that one* vs. ¹ʔurĭĭ *those*, ¹tĥkati *the one eating* (obj.) vs. ¹tĥkatii *the ones eating* (obj.), ¹sookonai *lots of water* (obj.) vs. ¹sokoña *on the ground*, ¹meeku *now* vs. ¹mekĭ *said*. These phonetically contrastive vowel lengths are interpreted phonemically as a sequence of two identical vowels by analogy to other VV sequences as ¹mĭa *moon*, ¹pĭeckU *tomorrow*, ¹piapĭ *big*, ¹ʔihpĭi *sleep*, ¹tuaʔ *son*, ¹tuinihpĭʔ *boy*, and ¹tirieʔtĭi *children*.[10]

Single vowels or sequences of identical vowels maintain their relative contrast except under conditions of morphemic alternation but the relative amount of difference in length between the two is conditioned by rhythm and position in the utterance. Sequences of identical vowels before pause (either /./ or /,/, see 4) are generally extra long. Non-phonemic modification of length is conditioned by rhythm as follows. (1) Within the same rhythm group (but not before pause) a sequence of identical vowels is perceptibly longer than a single vowel, but not as long as if before pause. (2) A single vowel in a rhythm unit containing only one syllable with only one vowel will still contrast with a rhythm unit containing a sequence of vowels or two syllables, even when the timing is maintained as approximately the same, by a non-phonemic compensatory lengthening of a following consonant or by slight pause if the short syllable comes at a point of optional pause (see 1). (3) When two parts of the utterance occur with rhythm groups which contain varying numbers of rhythm units, the relative contrast between single vowels and sequences of identical vowels applies only within the rhythm group be-

[128]

[10] We cannot here decide the question as to whether or not such sequences constitute two syllables or one. For purposes of description here they are assumed to be one. So far as prosodic evidence is concerned, the evidence of pitch level would lend weight to interpretation as single syllables, whereas rhythm stress may occasionally occur on the second member of such a cluster as in ¹tĭriˌe²ˌtĭĭ (8.1 (1), (2)).

[p. 300-A]

194 [104] to low) optionally on unstressed syllables containing a VV sequence before /./. ˈʔa[1]ˈnaa[1a]. (exclamation); ʔo[2a]ˈnoo[1a]. (exclamation); ˌˈʔī[1]ˌʁia[2]ro[2]ˌko[2]ʔI. (exclamation); ˌˈʔɨ̄[1a], ˌˈsɨ[1]ma[2]nu?[2], ˌˈwa[1]-na[2]ˌwi[2]ˌwih[2]ˌta?[2], ˌˈsɨ[1]ma[2]ˌnai[2]ˌku[2] ˈna[1]ˌʁo[2]ri[2] ˌˈʔu[1]ra[1]ʔI *Oh, I found a dollar bill!*; ˌˈʔu[2]sī[2a] ˌˈha[1]kaa[2]rī[2] *Who's that?*; nɨ[2a]ˌˈha[1]kai[2], ˌˈyɨ̄[1a]kᵛI *What shall I say?*; ˌˈkee[1a] nɨ[2]ˌˈrī[1]ʁoo?[2]ˌma?[2] *No, that's my pencil!*

194 • 128 A check of texts, both narrative and conversational, made on tape recording, and observation of Comanche speech in other situations than informant ones, revealed that this one pattern with its variants occurs on all utterances.

[104] The distinction made here between /,/ anticipatory pause, and /./ non-anticipatory pause, is as follows. Non-anticipatory pause is a pause preceded or followed by a modification of pitch or rhythm. It may be preceded by a drop of intonation to [1] or [1a]. It may be preceded by a dropping of the general height of voice through the utterance and followed by a sudden raising of voice height at the beginning of the next utterance. It may be followed by a quickened tempo of rhythm in the beginning of the next rhythm group. Anticipatory pause, on the other hand, is a pause without any modification of the pitch or rhythm of preceding or following utterances.

194 [104] /./ may coincide with grammatical sentence units or may group several such grammatical units. In the text compare (1), (2), (3), etc., where the non-anticipatory pause coincides with grammatical units, and the latter parts of the text where fewer such pauses occur. /;/ anticipatory pause, may occur at any potential (symbolized here by space).

[p. 301-A]

17: Casagrande E,L-5 (1940) 1965 NO6 Comanche NO6
Oklahoma

COMANCHE BABY LANGUAGE

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The Comanche language[1] reveals an unusually rich and formalised vocabulary of special baby words which were used in teaching the child to speak. Their use began when the child was old enough to understand, at about one year according to informants, and dropped off as the child matured and learned the normal, adult locutions at the age of 3 to 4. If a child persisted in using these words after the age of 5 or so, it would be laughed at and ridiculed for its babyish ways. Today English holds sway and these baby words no longer function actively, although children in those families or households where there are older persons who speak only Comanche may have some knowledge of them. So of necessity these data were recorded from the lips of adult speakers, most of whom, however, maintain a lively memory of the baby forms.

The following list was checked with eight informants and is probably exhaustive. Where known, the adult form or derivation is given in brackets after the translation of the baby word or words.

ʔáʔh, ʔáx, ʔáʔhA *something nasty or dirty; feces, urine, penis, a smell; warning to get away from something dirty; I have wet, dirtied myself; command for baby to defecate.*

ʔaʔhá·ʔ *no good!* (said to baby).

The next two forms are used in speaking to and by older children. They are derived from the baby words, but with regular verbal suffixes.

ʔáʔhi·kwhA *go off and defecate!*

ʔáʔhI, ʔáʔhinI? *I have dirtied myself.*

ʔanᵃ́·, ʔanó· *it hurts!* (pointing to place); *sore place, cut; command to child to get away from thing or place where it might get hurt.*

[1] The material for this paper was gathered on a field trip sponsored by Columbia University to the Comanche Indians living near Indiahoma, Oklahoma during the summer of 1940.

18: Jackson A-4,5 (1969) 1972 NO6 Comanche NO6
Oklahoma

THE JARED SITE: A COMANCHE BURIAL AT FORT SILL, OKLAHOMA

by

J. Brantley Jackson

128 **ABSTRACT**

A late 19th century ravine burial from Southwest Oklahoma is described. The site is compared with historic and anthropological records to document a nineteenth century Comanche burial practice.

INTRODUCTION

122 In November 1969, the Institute of the Great Plains (then the Museum of the Great Plains) and the U. S. Army Museum at Fort Sill sponsored the excavation of an historic burial on the 122 military reservation. Hallett H. Hammett, 114 Director of Research at the Institute, provided all equipment and materials and contributed substantially to the excavation and interpretation of 114 the site. Since I was in the Army at the time, I represented the U. S. Army Museum at the request of the director of the Museum, Gillett Griswold. We were aided by James Marler, retired Assistant Director of the U. S. Army Museum, and by Dr. Clyde C. Snow, Chief of the Physical Anthropology Section at the Federal Aviation Administration's Civil Areomedical Institute in Oklahoma City, who examined the skeletal material and who has kindly allowed me to incorporate his findings in this report. Chris Wagner contributed the art work.

121 The burial offers an unusual opportunity for archaeological documentation of one form of mortuary practice of the Southern Plains tribes. Although numerous other forms of burials -- cave, open field, crevice -- have been documented, there has previously been no archaeological validation of ravine burials reported in 19th century literature and recent anthropological treatises. It is hoped that the addition of archaeological evidence to reported findings may help make further identification of similar practices in this area more precise.

[p. 316-A]

face, the right hand palm up, fingers curled, the left hand palm down, fingers extended. The upper part of the legs had been brought up to approximately a right angle with the body, with the lower part of the legs tucked back toward the hips. Soil movements, the weight of overlying stones, and a tree root had caused considerable displacement of the bones. The left humerus was shattered just above the proximal end, having been pressed against a stone by a tree root. The left radius and ulna had been moved up vertically two to four centimeters by the same root. The left ribs had collapsed into the thoracic region; the vertebrae had separated in the lumbar and thoracic regions; and the right ribs had broken as the thorax and shoulder girdle collapsed. The left tibia was shattered near the distal end, and both legs had been raised vertically some 5 cm. by the tree root. A galvanized pail had been placed upright in front of the chest (Fig. 4). A saddle and a beaded bag containing 52 brass wire bracelets had been placed below (upstream from) and behind the feet. In front of the body near the base of the sternum was one brass wire bracelet, which may have been on the left arm above the elbow at the time of burial and may have become displaced by the action of the root that grew through the burial and crushed the humerus against an overlying stone. Two partial iron hoops or straps were found east of (upstream from) the saddle parts.

THE SKELETON

This section draws freely from and with grateful acknowledgment to the work of Dr. Clyde Snow.

Only one investigator has reported in detail on the anthropometry of the Southern Plains tribes: Goldstein worked with the Comanches in 1931 and concluded at the time of his research that only ten percent of the adults could be considered full-blood Comanches (Goldstein 1934:290). The measurements and indices made by Dr. Snow closely agree with the data presented by Goldstein. In Table 1, Dr. Snow lists the skeletal measurements and descriptions. It should be noted that cranial capacity was derived using the Lee-Pearson formula (Lee and Pearson 1901). In addition to the measurements and indices obtained from the skeleton, Dr. Snow has prepared a table summarizing the data as traits indicative of sex, race, and cultural status. Table 2 thus shows at a glance some important characteristics of this skeleton.

[See p. 320-B—Analyst.]

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Figure 4. Galvanized pail from 34CM221.

172 141 128 *Sex:* Table 2 shows the morphological and metric traits diagnostic of sex. Both the pelvis and the skull are typically female. A more objective assessment of sex is obtained with the discriminant function formula of Giles and Elliot (1963). The value derived from the formula, 899.02, lies on the "female" side of the sectioning point of 912.14 for American Indian crania.

172 144 [141] [128] *Race:* Table 2 indicates a predominately Mongoloid racial affinity. The Giles-Elliot discriminant analysis for race (1962) would classify the skull as "indeterminate" but with rather less likelihood of being white than Negro or American Indian. A possible explanation for the "indeterminate" status of the skull lies in the fact that Southern Plains tribes have long been active in assimilating non-Indian captives into their breeding populations.

172 141 128 *Age:* Since the symphyseal facets of the pubis were largely destroyed, cranial suture were relied on for age. The mean for 16-segment closure ratings is 1.09 (Nemerski, Harsanyi, and Ascadi: 1960:95), indicating an age of 25-35 years. This estimate is partly supported by the minimal osteo-arthritic lipping of the lumbar vertebrae,

[TEXT CONTINUED ON PAGE 320-A]

Table 1 (continued)

Transverse diameter	18	18
Anterior-posterior diameter	21	21
Femur		
Maximum length	415	---
Physiological length	409	---
Transverse diameter	26	---
AP diameter	27	---
Subtrochanteric diameter, AP	25	---
Subtrochanteric diameter, transverse	30	---
Head diameter, vertical	45	---
Head diameter, horizontal	46	---
Bicondylar diameter (estimate)	73	---
Collo-diaphyseal angle	137°	---
Tibia		
Maximum length	322	318
AP diameter (nutrient foramen)	32	30
Transverse diameter (nutrient foramen)	22	21
Bicondylar diameter	---	70
Fibula		
Maximum length	318	---

Long bone indices	Value	Class
Diaphyseal index, humerus	75.2	Platybrachic
Brachial index (humerus/radius)	72.4	Short
Platoleneal index, ulna	85.7	Uroleneal
Index of robustness, femur	13	Average
Pilasteric index, femur	103.8	Weak
Platymeric index, femur	83.3	Platymeric
Tibio-femoral index	78.7	---
Cnemial index	69.4	Mesocnemic
Humero-femoral index	73.3	---
Intermembral index	70	Average

the general texture of the bones, and the relatively unworn second and third molars.

Stature: Since there are no reliable estimates for determining female Mongoloid stature, the Trotter-Gleser table (Trotter and Gleser 1952, Table 13) for white females was used. Thirteen calculations were made; the results range from 152.78 cm. to 162.80 cm., averaging 157.31 cm. Since Mongoloids have rather shorter legs relative to trunk height than do whites, this average may be an underestimate by two to five centimeters. Goldstein (1934:299) reported an average stature of 156.1 cm. for 25 full-blood Comanche females measured in 1931. Since Indians of mixed blood almost always exhibit maximum dimensions greater than full-bloods, the skeleton would fit into the range of variation expected for either the full-blood or the mixed blood population.

Cultural status: The heavy dental attrition indi-

18: Jackson A-4,5 (1969) 1972 NO6 Comanche NO6
Oklahoma

TABLE 2
TRAITS INDICATIVE OF
SEX, RACE, AND CULTURE STATUS

Trait	Sex		Culture		Race		
			Primitive	Modern	Negroid	Caucasoid	Mongoloid
Skull and Mandible							
Mesocrany		X				X	X
Low Skull			X				
Cranial Capacity		X					
Chiprin							X
Mesony							X
Phenicrany			X				X
Stenometopism					X		X
Frontoparietal Index					X		
Hypsicrany		X					X
Mesognathy		X					X
Brachystaphyline							X
Brachycrany						X	X
Orthognathy (Upper Face)		X				X	X
Mesognathy (Alveolar)		X					X
Facial Flatness		X					X
Nuchal Crests		X					
Mastoid Processes		X					
Supra-orbital Ridges		X					
Arch Form						X	X
Molar Form		X					X
Prenasal Fossa							X
Dental Wear			X				
Shovel-shaped Incisors							X
Edge-to-Edge Bite			X				
Maxillofrontal Index					X	X	
Fronto-gonic Index			X				
Gonio-Condylar Index						X	X
Ramus Index							X
Gonial Angle		X					X
Symphyseal Angle							X
Simotic Sutures					X		X
Post-Cranial							
Humeral Head Diameter		X					
Platybrachia							X
Supracondyloid Foramen Breadth		X					X
Brachial Index						X	
Virginy		X					X
Iliac Breadth Index		X					
Sciatic Notch Angle		X					
Acetabular Index		X					
Platymeric Index		X					
Bicondylar Diameter Femur		X					
Index of Robustness							X
Pilastric Index		X				X	
Platycnemia			X			X	
Mesocnemia		X					X
Squatting Facets			X				

cates a coarse diet with much gritty contamination. This wear is relatively greater in the anterior dental arcade, indicating some use of the teeth in preparing hides, cordage, etc. At least one tibia shows the presence of squatters facet, and the femurs are platymeric. Both conditions are indicative of primitive living.

Conclusions: The osteological evidence thus indicates an adult female Plains Indian, 25-35 years old, who lived at a time before acculturative shifts in diet would reduce tooth wear. Although the observations fit the data given by Goldstein (1934), it is not possible to assign the skeleton definitely to the Comanche because of the limited sample on which the comparison was based.

ARTIFACTS

172 [128] The upper case letter preceding each unit can be used to locate that unit in Figure 1.

(A) The body had been placed on part of a black rubber-coated cloth tarpaulin or poncho, possibly of U.S. Army issue. Among the small pieces that remained of the poncho were five circular brass grommets with five-millimeter openings and several pieces of finished edge showing machine stitching.

(B) Of the fifty-three brass wire bracelets found, one was in front of the chest, and 52 were in the remnants of a beaded skin bag near the saddle parts at the foot of the grave. Viewed in cross section, two of the bracelets are round and 51 have flattened sides. The bracelets were made from lengths of brass wire, cut with a chisel, most of them with the ends smoothed by filing. Two of the parallel-sided bracelets are decorated with chisel cuts on their top surfaces (Fig. 5*f-g*). The bracelets range in diameter from 1.7 mm. to 2.8 mm., averaging 2.3 mm.

172 171 Bracelets similar in diameter and design were found at the White site (Suhm 1962:94-7 and Fig. 2), a mid-to late-19th century child's grave of assumed Comanche affiliation in Yoakum County, Texas. Similarly decorated brass wire bracelets of a larger diameter were found at the W. H. Watson site (Ray and Jelks 1964:135-7 and Fig. 5) in Fisher County, Texas. The authors reported a crevice burial of a woman in a standing position and interpreted the site as a Comanche grave dating before 1840.

172 (C) Two small fragments of skin from the bag were preserved under the bracelets. Also preserved were two small patches of the beaded design originally made up of at least 1,857 beads. All of the beads are of the simple cylindrical "seed bead" type. Colors present are opaque white, blue, and green; and translucent turquoise, light blue, dark blue, red, and amber. Lengths of the beads range from 1.5 mm. to 2.5 mm., diameters from 2.1 mm. to 3.1 mm. The amber beads are slightly smaller than the other beads, and the light and dark transiucent blue beads have thinner walls than the other beads.

[171] A broken shell hair pipe bead, probably *Strombus gigas*, was among the bracelets. This bead, whose broken end had been smoothed, may have been threaded on a drawstring of the bag, as is the case with two hair pipe beads on a Kiowa bag illustrated by Ewers (1957, Plate 29).

(D) While none of the wooden frame or leather covering remained, the nature of the

A [See p. 317—Analyst.]

20: Wallace H-4,5 (1945) 1953 NO6 Comanche NO6

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THE COMANCHES ON THE WHITE MAN'S ROAD*

ERNEST WALLACE

The Comanches constituted one of the major tribes of the southern Great Plains. They came down from the north shortly after 1700 and within a quarter of a century had established themselves as lords over a vast area extending from the Arkansas River on the north to the Hill Country around San Antonio on the south, and from the Cross Timbers or approximately along the line of the ninety-eighth meridian on the east to the Pecos River and the mountains above its headwaters on the west. For a century and a half these spartans of the prairies successfully repelled all efforts of both red men and white men to encroach on their hunting grounds, while at the same time they pillaged Mexican communities far south of the Rio Grande and made the frontier settlements of the Anglo-Americans unsafe.

Comanche culture was of the typical plains Indian character. The Comanches were nomadic hunters, warriors, and raiders. They had no agriculture (in historic time, at least);

*Ernest Wallace and E. Adamson Hoebel, The Comanches (University of Oklahoma Press, Norman, 1952) is a study of the old way of life of the Comanches. Acculturation and twentieth century development are topics outside the scope of that study. Surrounded after their capitulation by whites who regarded their own civilization inferior to none, the Comanches, for lack of any alternative, reluctantly proceeded to accept in part the civilization of their conqueror or, as the Comanches say, "The White Man's Road." This article, taking up where the book leaves them, attempts to trace briefly the historical development of the Comanches after they were compelled to accept life on the reservation. In addition to the cited source material, this article is supported by field work of the author among the Comanches in the summer of 1946.

21: Burnet T-5 (1818-1819) 1954 NO6 Comanche NO6
Texas

(ca. 1818)

By comparison with the several minor hordes that are located in the province of Texas, the Comanchees are certainly a very considerable nation. But much is abstracted from their political importance, by their habitual indolence, and their utter unfitness for any thing like serious and protracted warfare. I speak relatively, and under the presumption that they are to be seriously and perseveringly opposed. Without, however, making any moral abatements, they will fall considerably short of the opinion that has obtained in your quarter, as to their actual strength. The idea has been frequently propagated that they can furnish from 12 to 20,000 warriors, and those too of no ordinary prowess.

I do not conceive it necessary to inculcate exaggerated notions of their aggregate strength, or individual bravery, in order to make out their pretensions to the notice of at least the territorial government of Arkansas. Estimate them as they really are, and they may be found sufficiently formidable to excite alarm in a feeble and unprotected frontier; and no portion of our country has partaken less of the parental kindness of the federal administration, than that which is most immediately exposed to their depredations. The following will be found as correct a statement of their numbers and general character as a close observation during a residence among them for several months, has enabled me to obtain.

The tribe known among us by the term Comanchees, is divided into three great parties, each of which is distinguished by a separate appellation, to wit:

Comanchees, Yamparacks, and Tenaways.*

The Comanchees, the lower or most southern party, range through a section of country that is watered by the Colorado or Red river of Texas, embracing in their circuits both sides of the river, from its headwaters to the confluence

*There were at this time at least half a dozen Comanche divisions. It is well to remember that Burnet had direct acquaintance with relatively few Comanches and his means of learning about the others was limited.

23: Cabello y Robles G-3 (1778-1786) 1962
NO6 Comanche NO6
Eastern Comanche

A DESCRIPTION OF THE COMANCHE INDIANS IN 1786 BY THE GOVERNOR OF TEXAS*

TRANSLATED AND EDITED BY ODIE B. FAULK

175 648 721

The Comanches first appeared in New Mexico in 1706. By mid-century they had driven the Jicarrilla Apaches from the northeastern region of that province and were devastating the Spanish settlements east of the Rio Grande. Continuing their advance southward, these fierce warriors drove the Texas Apaches back upon the Spanish settlements at San Antonio and below the Rio Grande. Their victory at San Saba in 1758 over the Spaniards, whom they considered to be Apache allies, assured their domination on the plains.

175 648

Under the illusion that the Comanches would remain away from the settled areas of their control, the Spaniards determined in 1779 to form an alliance with them with the intent of the total destruction or reduction of the Apaches. Although participation in the American Revolution interfered to some extent with the plan, Spanish officials proceeded, nevertheless, with their efforts to bring the Comanches into an alliance. In New Mexico Governor Juan Bautista de Anza (1778-1788) secured the desired treaty with the Western Comanches (Yamparikas) in July, 1785, and in Texas Governor Domingo Cabello y Robles (1778-1786) achieved the same goal in October, 1785, with the Eastern Comanches (Kotsetekas and Penatekas).

175 128

The acting commandant-general of the Interior Provinces, José Antonio de Rengel (1784-1786), desiring information which would indicate whether the Comanche raiders would keep the peace treaties they had just signed, sent the gover-

*Domingo Cabello, "Respuestas qe el Govr de la Prova de los Texas da a las Preguntas que el Sñr Come Gral de las Yntern.s le hase en oficio de 27 de Enero de 1786: sobre varias circunstancias de los Yndios Cumanches Orientales," April 30, 1786, Bexar Archives (University of Texas Archives, Austin).

113

23: Cabello y Robles G-3 (1778-1786) 1961
N06 Comanche N06
Eastern Comanche

(ca. 1786)

nor of Texas a number of questions about this tribe. A translation of Governor's Cabello's reply follows:

Domingo Cabello: "Answers that the Governor of the Province of Texas Gave to the Questions that the Señor Commandant-General of the Interior [Provinces] asked in a letter dated January 27, 1786, about various circumstances of the Eastern Comanche Indians," April 30, 1786, Bexar Archives.

FIRST: About Their Customs.

According to what is known about this Nation, it is the most brave and warlike of those [tribes] that inhabit the North; and when they have friendship they are very friendly and of a generous mood, and friends of their friends, although delicate in the mode with which they make friendship. They adore very much the skins of animals which they customarily bring with them, and which they fasten on themselves during the encounters of war, so that they will not be killed or wounded in any manner; and if any misfortune befall them, they attribute it to having given some offense to this specie of idol, such as not having offered it food or the smoke (*humo*) of tobacco each time they smoke (*fuman*), or that women have defiled the ceremonies which they make use of when they take the pipe in hand. Some devote themselves in this manner to adoring a buffalo hide, others to that of the bear, others to the otter, and others to that of some birds, whose skin, still with its feathers, they use to adorn themselves. Their marriages they celebrate with as many women as they are able to maintain; if someone distinguishes himself in bravery and in actions made against his enemies, or something of a similar nature, some fathers give him even of their daughters, and it is the custom many times for him to marry with the sisters [of his wife]; husbands maintain their women with the buffalo and deer which they hunt; [the women] are obliged to work the meat and [prepare] the hides of the said animals. [The husbands] are so extremely jealous that for very trifling motives they kill their women; furthermore, when these mild ones give occasion for it, the husbands treat them with much blindness and harshness, as if they were slaves.

194 wahcĪ *this is my rib* versus 'ʔica?ni'nakI *this is my ear.*

It may be noted here, furthermore, that there is frequently morpho-phonemic alternation between a pre-consonantal /h/ and a post-consonantal voiceless vowel preceding certain suffixes. Compare the stem alternants 'pohpi- and 'popI- before the suffix -tu?I *future tense* and -ci *dependent completed action by the subject* in the illustrations 'pohpitu?Inī? *I am going to jump* and 'popIcinī?'miaru?I *having jumped, I will go.*

The contrast /a/, /A/ is extremely rare due to the low frequency of occurrence of /A/ and its frequent morpho-phonemic alternation with /Ī/. Whereas the analogies 'pohpi-, 'popI-; 'co?me-, 'co?mE-; 'ʔuhtu-, 'ʔutU- preceding -ki, -kʷa and other morphemes are common, the analogy 'tihka-, *'tikA- would be erroneous. Rather, the second form would be 'tikĪ-. However, preceding -ci *dependent completed action by the subject* and ci, a syllable in the stem 'ni?aci- *to advise*, a valid contrast can be observed, e.g. 'mi?Acinī?'tihkaru?I *having gone, I will eat* versus ?u'ni?aciki?u? *he came to advise him.*

128 The preceding illustrations have given crucial contrastive data for each of the six vowel pairs. The following miscellaneous sets of forms supplement those given above and the phonemicization postulated in reference to them.

194 In the first set of examples, the contrast between /i/, /I/ occurs following stops and preceding the identical morpheme -nīī *plural*, e.g. 'papinīī *heads*, 'nakInīī *ears*, 194 'tiBoowapInīī *teachers*, 'to?Inīī *pipes*. Note that it was a pair of this type which Jakob- 114 son used for his spectrographic analysis: 'tīri?aiwapInīī *hired hands* and 'tipinīī 114 *stones*. At the time the tape was sent to him, the minimal pairs quoted above had not been discovered and none occur in the data of Riggs and Smalley. Nevertheless, the earlier data of contrast in analogous (non-conditioning) environment appeared to all

[p.65-A]

26: Cummins & Goldstein D-5 (no date) 1932 NO6 Comanche NO6
Oklahoma

DERMATOGLYPHICS IN COMANCHE INDIANS[1]

HAROLD CUMMINS[2] AND MARCUS S. GOLDSTEIN

This note reports an analysis of the palmar dermatoglyphics and finger prints in seventy-nine North American Indians (Comanches, in Oklahoma). Beginning with Wilder's pioneer contribution, 1904, there has been sufficient investigation of racial variation in dermatoglyphics to demonstrate the existence of distinctive racial trends in these features. There is not yet available, however, an adequate body of comparative data for broad discussion of racial resemblances and differences. The present report is accordingly treated simply as a record of findings in the Comanche sample, to provide the detailed data necessary for future racial comparisons. In view of this purpose, neither a review of the field nor a full bibliography is considered essential.[3] It may be pointed out that little work has been done with the dermatoglyphics of North American Indians. Downey (Types of dextrality among North American Indians, Jour. Exp. Psychol., vol. 10, 1927) records finger-print data for fifty Arapahoes. Cummins presented before the American Association of Physical Anthropologists, in March, 1932, an account of findings (palmar and plantar features) in twenty-seven Shoshonis and Arapahoes.

[1] Grateful acknowledgment is extended to the American Association for the Advancement of Science for a grant-in-aid which made it possible to secure the data here reported. We are further indebted to the authorities of the Indian School at Lawton, Oklahoma, for their invaluable cooperation in providing access to subjects.

[2] Department of Anatomy, Tulane University.

[3] For bibliography see especially: Bonnevie, K., J. Genet., XV, 1924; Bonnevie, K., Z. indukt. Abst- & Vererbungsl., LIX, 1931; Cummins, H., Am. J. Phys. Anthrop., XV, 1930; Midlo, C., and H. Cummins, ibid., XVI, 1931.

26: Cummins & Goldstein D-5 (no date) 1932 NO6 Comanche NO6
Oklahoma

125 Of the 79 Comanches here reported 27 are males and 52 [144] are females. Thirty-four are full-blood or probably full-blood, 41 are mixed (especially with 'Mexican') or probably mixed, and 4 are questionable. The prints were obtained by Goldstein in the course of other work on the physical anthropology of the Comanches, and the foregoing statement of the racial composition of the sample is based upon individual diagnoses employing the usual criteria (Hrdlička's skin reaction, pigmentation, character of hair, eye color, facial features, inquiry respecting geneaology, etc.). While there was no specific investigation into possible family relationships among the individuals in the series, the circumstances of collection indicate that close relationships are negligible in number if present at all.

128 The prints, prepared by the common printers' ink method, 125 are generally of excellent technical quality, and in many cases there are duplicate impressions. In certain determinations the full series of seventy-nine subjects cannot be utilized. Two subjects are each represented by prints of but one hand, and occasionally a print may be incomplete or indecipherable 128 in a critical territory. Such instances are appropriately set aside in the calculations, and it is to be emphasized that all omissions of prints in the several calculations are due solely to this correction, every available observation having been included.

The methods of interpretation and formulation of the apical finger patterns follow Galton (1892); the palmar features are formulated after Cummins et al. ('29).

Palmar main lines

142 The terminations of palmar main lines are summarized in table 1. Line A shows a high frequency of terminations in the proximal palmar margin (positions 1 and 2) and in the more proximal portion of the ulnar margin (position 3). Line C presents an exceptional abundance of suppressed and abortive states (formulated X, x, and O in accordance with the specific character of the line), which occur in 25.5 per cent

26: Cummins & Goldstein D-5 (no date) 1932 NO6 Comanche NO6
Oklahoma

Palmar patterns

The occurrence of patterns in the five palmar areas are listed in table 2. It will be understood that in each case the determination aims only to distinguish the occurrence of patterns and patternless configurations. Each figure in the table applies to the frequency of patterns, while the implied percentile remainder indicates the frequency of patternless configurations.

Especially outstanding, in the figures of table 2, are the low frequency of hypothenar patterns and the abundance of the thenar/first interdigital.

TABLE 2

Percentile occurrences of true patterns and pattern vestiges (not including 'multiplications') of the five palmar areas. Compiled from 77 right palms and 79 lefts

PATTERN	RIGHT, PER CENT	LEFT, PER CENT	AVERAGE, PER CENT
Hypothenar	15.6	19.0	17.3
Thenar/First interdigital	28.6	41.8	35.2
Second interdigital	2.6	2.5	2.5
Third interdigital	41.6	19.0	30.3
Fourth interdigital	54.5	73.4	63.9

Apical finger patterns

Calculation of the total frequencies of the pattern types is based upon sixty-seven individuals, the remainder of the finger-print sets being incomplete and thus unsuited to the determination. In these 670 prints the distribution of pattern types is as follows: whorls, 43.3 per cent; radial loops, 1.9 per cent; ulnar loops, 48.5 per cent; arches, 6.3 per cent. The corresponding figures in Downey's series of fifty Arapahoes (loc. cit.) are: whorls, 47.6 per cent; radial loops, 3.6 per cent; ulnar loops, 44.2 per cent; arches, 4.6 per cent. It would appear that the abundance of whorls is a substantial Indian trait.

In view of the high frequency of whorls, it may be of interest to state the composition of the material in terms of

26: Cummins & Goldstein D-5 (no date) 1932 NO6 Comanche NO6
Oklahoma

a newly devised 'index of pattern intensity' (Cummins and M. Steggerda, unpublished manuscript). The index of pattern intensity is an expression which reduces the pattern composition of the individual finger-print set to an integral value. It is based on the assumption that arches, loops, and whorls represent successively increasing weights of pattern intensity. These configurations are assigned, respectively, the values of 0, 1, and 2. The index of pattern intensity of the individual is simply the sum of the ten digital values. The indices thus range from 0 to 20.

The mean index of pattern intensity in this Comanche series is 13.7 ± .31. While the available collections computed on this basis (Cummins and M. Steggerda, MS.) are likewise small and consequently associated with a large probable error, the following indices are noted for comparison: Eskimos, 14.25 ± .35; Jews, 13.84 ± .18; European-Americans, 12.70 ± .24; Dutch (a selected family series), 11.09 ± .23.

TABLE 3

Percentile occurrences of pattern types for each digit. R, right; L, left

DIGITS	I		II		III		IV		V	
Hands	R	L	R	L	R	L	R	L	R	L
Number of digits compiled	71	73	75	75	76	79	76	77	75	76
Arches	2.8	1.4	16.0	14.7	5.3	7.6	1.3	2.6	4.0	2.6
Radial loops	1.4	1.4	8.0	5.3				2.6		
Ulnar loops	33.8	37.0	36.0	36.0	68.4	63.3	26.3	29.9	80.0	80.3
Whorls	62.0	60.0	40.0	44.0	26.3	29.1	72.4	64.9	16.0	17.1

The distribution of the indices in the Comanche series may be compactly stated by dividing the 21 indices into 7 classes, identifying each class by its center as follows: 1, 0 per cent; 4, 1.5 per cent; 7, 9 per cent; 10, 15 per cent; 13, 31.3 per cent; 16, 22.4 per cent; 19, 20.9 per cent.

The distributions of pattern types, separately for each digit, are shown in table 3. While the series is too small to justify a positive conclusion, there is a suggestion of a

26: Cummins & Goldstein D-5 (no date) 1932 NO6 Comanche NO6
Oklahoma

142 tendency toward suppression of the characteristic dextral superiority in the occurrence of whorls. In this connection it may be remarked that there is yet another indication of suppression of a characteristic bimanual difference, expressed [144] in the palmar hypothenar pattern. And it should not be forgotten that corresponding bimanual comparisons, involving both apical and hypothenar patterns have been previously reported in Indians of southern Mexico and Central America (Cummins, '30).

POSSIBLE INFLUENCE OF RACIAL ADMIXTURE

128 Inasmuch as individual diagnoses of racial admixture are available, it is possible to isolate the series of full-bloods for separate analysis. This separation is suggested not only by the obvious desirability of treating a full-blood stock when it can be secured, but also by the known results of admixture in Jamaican black-white crosses (I. D. Steggerda). In the Jamaican crosses the "Brown individuals approximate the Blacks more nearly than they do the Whites" in dermatoglyphic features. It is evident that traits of the Comanches 142 are not generally obscured by the inclusion in the sample of 144 a large proportion of mixed stock, and it may be assumed 128 accordingly that either the sources of admixture are closely allied in their dermatoglyphics or that the Comanche traits dominate the admixture. The separate calculations of palmar main lines, palmar patterns, and apical finger patterns reveal but one item in which the incidences are significantly different in the selected full-bloods. This feature is the hypothenar pattern, which occurs in only 4 per cent of the full-blood hands. With this exception, therefore, it is evident that the inclusion of mixed-bloods has not vitiated the series as a sample of Comanche dermatoglyphics.

27: St. Clair & Lowie U,E-4,5 (no date) 1909
NO6 Comanche NO6
Wind River NQ19

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SHOSHONE AND COMANCHE TALES

COLLECTED BY H. H. ST. CLAIR, 2D; EDITED BY R. H. LOWIE

THE following tales were recorded by Mr. H. H. St. Clair, 2d, among the Wind River Shoshone of Wyoming and the Comanche, and are edited on the basis of his interlinear renderings. As a collection of Shoshone myths from Lemhi, Idaho, has been published recently,[1] Wind River duplicates are given only in abstracts referring to points of difference.

The most noteworthy feature of the new Shoshone myths is the occurrence of certain widespread motives not obtained from the Lemhi Indians. Foremost among these is the marriage of two girls to stars. Very significant details connect the Wind River version with that of the Blackfoot. In both cases, the girls, after having wished for star-husbands, are delayed by the loss of their baggage; in both the star-child disappears on the infraction of a taboo, and becomes a star. The eye-juggler motive is naturally joined to a story, shared by the Lemhi and Comanche, of blind Coyote's adventures; a similar sequel occurs in the Blackfoot variant. The magic flight turns up in an ogre tale not related to the published Dzō'avits myths, which has also absorbed the crane-leg bridge motive of the Lemhi Bear and Deer story. Unfortunately, the cosmogonic fragments do not elucidate the relation of Ā'pö ("Our Father") to Wolf and Coyote, with whom the Lemhi occasionally identify him, while at other times he appears as a distinct character. In the colorless account of the Deluge, birds are sent out for land, but the diving for earth is not explicitly mentioned. The belief that the crow turned black in consequence of having devoured the drowned Indians is common to the Wind River and Lemhi people, though among the latter it was voiced only in conversation with the writer, and not in connection with the tale.

The Comanche myths are far too few in number to permit a thoroughgoing comparison with Shoshone folk-lore. The eye-juggler motive

[1] Lowie, "The Northern Shoshone" (*Anthropological Papers of the American Museum of Natural History*, vol. ii, part ii, pp. 236–302).

[p. 265]

28: Thomas H-4 (no date) 1962 NO6 Comanche NO6
(1786)

According to one informant the chief (any chief) long ago carried an otter-wrapped hooked stick . . . . with the crook of which he would catch a fleeing enemy and pull him from his horse.[15] 171

Kroeber, describing an Arapaho ceremonial organization of five degrees, also notes the presence of hooked sticks. In the ceremony he states all the participants carry lances; the two dancers of the second degree hooked ones; the dancers of the third degree straight lances.[16] The excellent plate of an Arapaho warrior with a hooked lance shown in Kroeber's *The Arapaho* reveals a detail that may be significant here. It will be noted in that plate that the turned down tip is held in position by a string or cord tied to the perpendicular part of the lance itself.[17] The Spanish copyist of the original Comanche report intended to indicate, possibly, a similar connection by the straight line drawn across the perpendicular of the "f" shaped figure, which gives those figures in the present reproduction their distinctive "f" character. 175

It is significant to note here, also, that the straight lances are indicated with point downward.[18] (See pl. 17.) This was the common method of carrying both straight and hooked lances. These lances were commonly thrust into the ground by the bearer, who must fight beside them no matter what the outcome until his standard was plucked out by one of his fellows and he was thereby released. The "f" shaped figures, placed at intervals in the line are also suggestive inasmuch as it was characteristic of Indian leaders to take position, not in front of their fellows, but within the line, which incidentally was a skirmish line.[19]

The lance was not only a standard carried in battle but was likewise a characteristic sign of office carried by the leaders.[20] The [701] [554] [113]

[15] Lowie, Notes on Shoshonean Ethnography. Am. Mus. Nat. Hist. Anthr. Pap., 20: 283, 1924.

[16] A. L. Kroeber, The Arapaho. Am. Mus. Nat. Hist., Bull. 18: 159.

[17] Kroeber, The Arapaho, facing p. 175.

[18] The photographic reproduction here of the figure holding two lances, points downward, is from the original inscribed on a ledge of rocks eleven miles east and six miles north of Kenton, Oklahoma, in what is known as North Canyon. This was in general Comanche territory. The writer is indebted to Mr. W. C. Baker and Mr. C. A. Esmay, photographer, of Boise City, Oklahoma, for the photograph. [128]

[19] Murie, Pawnee Indian Societies, 569, 578.

[20] Lowie, Dances and Societies of the Plains Shoshone, 847, 896; Murie, Pawnee Indian Societies, 560.

28: Thomas H-4 (no date) 1962 NO6 Comanche NO6
(1786)

Tosaporua:	'Oso blanco, de la Rama Yamparica:[31]	White Bear, of the Yamparica branch	8
Pasahuoques:	Ladra Ronco, Idm:	Hoarse Bark, Idm.	20
		Fourth led by Tosapoy	
Ysaquebera:	Lobo Largo, Yupe:	Long Wolf, Yupe[32]	80
Tuchubarua:	Hozo Paxarito, Idm:	Bear Bird, Idm.	9
Encantime:	Savandija, Idm:	Beetle, Idm.	11
		Fifth led by Paraginachi	
Pagabipo:	Vasija de Panza, Yamparica:	Basin Pauch, Yamparica	15
Cunabunit:	El que vió Fuego, Ydm:	He who saw Fire, Idm.	10
Quahuahacante:	Cuero matado:	Dead Hide	8
		Total	593

NOTE

The number of individuals whom they have at their command exceeds at least by a third part that computed by this statement.[33]

. . . . . [34]

It is a certified copy. Janos 13 of March 1788 in accordance with the order of the Senor Commandante General.

Juan Gasiot y Miralles (Rubric)

FOURTH ENCLOSURE[35]

Names of twenty-two other Comanche despatched by Equeracapa to Governor Don Juan Bautista de Anza in place of eight whom he asked for

[31] Yamparica, Anza stated, comes from the word Yampa, a species of sweet root which abounds in the country of these Indians (Relacion, paragraph 2).

[32] The word Yupe is also written by the Spaniards, Yupinis and Gente de Palo. The latter may be translated as Stick People or Timber People. In this connection it is interesting to note that the Council, mentioned in this Noticia, which selected Equeracapa as chief of all the Comanche, met on the Arkansas river in a spot called La Casa de Palo or the House of Timber or Stick (Relacion, paragraph 2).

[33] It will be observed that this note is apparently a restatement of the last phrase of the opening paragraph of this Noticia that each tent has about three men of arms. The total number of warriors would accordingly be between seventeen hundred and eighteen hundred.

[34] A list of five chiefs' names, all appearing on the Tally Sheet is omitted here since the Spanish equivalents are not given. Of these five names, three, Salambipu, Encajive, and Piaquegipe, do not appear in the lists of the Noticia or the Fourth Enclosure so that their meanings are unknown.

[35] This list of twenty-two names is a fourth enclosure accompanying the Relacion. The other three enclosures as already noted are a copy of the Tally Sheet, the Noticia, and the Ynforme of Ortiz. (See footnotes 4, 7, and 21 above.)

31: Jones E-5 (1967-1970) 1972 NO6 Comanche NO6
Oklahoma

121 doctor. Ethnographic materials and popular materials on the colorful Comanche raiders are available, but very little has been previously recorded on the institution of the Comanche traditional doctor.

123 Jones was able to obtain his excellent data as the adopted son of Sanapia. As he explains, this close association had disadvantages as well as advantages. It was assumed, for example, that as Sanapia's son, the author would automatically know many of the obvious aspects of the doctor's role. Furthermore, the role of "Young Son" carried with it a series of complex, reciprocal role relations.

128 The reader is given intimate details concerning Sanapia's training, which was lengthy and complex. After the final rituals involved in receiving the Power necessary for an Eagle doctor, Sanapia had to be passed on separately by four different instructors.

One unique chapter is devoted to the detailed preparation of herbal medicines and methods of administering them. The illnesses treated ranged from heart pain, pneumonia, and paralysis to exzema and loss of appetite.

158 Since Sanapia spent a great deal of time treating "ghost-sickness," the [128] author explains the meaning of the concept and describes the symptoms and treatment. Jones analyzes the psychogenic roots of this disease, considered by the Comanche to be peculiar to the "Indian." The author believes the malady may be viewed as a conversion reaction related to unmanageable psychic stresses.

756 The author attributes Sanapia's success as an Eagle doctor to the fact that 153 she was able to adapt quickly to the changes taking place in Comanche culture. This process of adaptation was simplified for Sanapia as her own home environment had required that she adjust to three disparate religious systems—the Christianity of her father, the Peyotism of her uncle and paternal grandfather, and the Plains Indian pattern of vision quests and guardian spirit represented by her mother, the Eagle doctor.

000 Upon completing the reading of the detailed study of Sanapia's training and role behaviors, the reader feels that he knows Sanapia more intimately than do her own peers.

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[142]
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[516]

Sanapia preparing medicine.

but since Sanapia almost exclusively uses only the root of the plant for medicine, this concern with flowing water seems ubiquitous on medicine-plant-collecting trips.

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[171]

Her dosages of the various botanical medicines follow the mystical number four found in the southern Plains area. The medicinal decoctions and infusions which she prepares are always given in units of four—four cupsful, four spoonsful, and so forth. Her externally applied medicines, such as salves and liniments, are administered with four movements of the hand; and when dried cedar leaves are employed to produce medicine smoke, they are deposited on the live coals in the course of four consecutive abbreviated motions of the hand.

128

In the following discussions, a standardized introductory line will be used for each plant when possible. The Comanche term for the plant will be presented first, followed by Sanapia's translation of the Comanche term. The English translation of the Comanche term will be followed by the binomial classification of the plant, which in turn will be followed by the English common name.

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ekapokowa:pi

"red berry cedar". *Juniperus pinchotii* (red cedar, juniper)

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elaborate on this statement, only suggesting that she works to make her patient believe in her since he will not regain his health if he does not have faith in her powers. Some of Sanapia's expatients have noted her ability to make things appear and disappear; however, as mentioned previously, Sanapia will deny that she does sleight of hand.

Sanapia is aware that her shamanistic performance is expected by her patients and that it is a necessary element in strengthening their faith in her. However, she states that she could marshal her powers for healing without the performance, though the patient would not be highly impressed. Sanapia must move the patient to an emotional acceptance of her powers, for she feels that without the patient's confirmed faith her powers can do nothing toward curing him. Sanapia's belief that the patient's attitude toward the doctor is of significant importance in determining the outcome of the treatment is based in a sound grasp of psychotherapeutic principle, though in her case it is couched in the mystique of the faith healer.

Number of Patients per Year

How many patients does Sanapia doctor each year? This would be a difficult question to answer exactly. Sanapia does not think in these terms. Further she does not consider it "proper" to discuss the question. I would estimate, however, that she doctors approximately six cases of ghost sickness per year, and she may treat twenty patients suffering from more standard ailments during the same time. These estimates are based on clues collected during several years of interviewing and on observations of the contents of her medicine kit. I observed her medicine kit in the early fall when her medicines were almost totally depleted and watched as she collected what she felt would be a sufficient quantity of medicines to last until the next collecting season the following fall. From a knowledge of the possible combinations and quantities of dosages of these medicines, I estimated how many patients could be treated before the medicine supply would be depleted. This estimate corresponded closely with the estimates based on interview material.

What Is Ghost Sickness?

This is an important question. The key to understanding Sanapia's vital function in twentieth-century Comanche society rests with the answer. Ghost sickness may be an entirely organic or static affliction, perhaps a variety of organically motivated transient paralysis. Then again, a viewpoint suggesting the psychogenic nature of ghost sickness presented itself when Sanapia's accounts of ghost sickness victims were perused, particularly noting the age and sex of the victim. In the majority of cases, the victim was male, twenty-five to forty years of age. Also, based on interviews with ghost-sickness victims and information gathered from Comanche informants, it was discovered that these individuals were all very similar personalities.

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Ghost Sickness and Witch Sickness

Sanapia's great success in curing ghost-sickness victims appears to give further support to the idea of the psychogenesis of ghost sickness. Then again, she would also be attributed with success in curing a transient unilateral facial paralysis of an organic genesis which ran its course during the time of treatment or within a suitable time span after treatment. Of course, they both support the same conclusion to the Comanches: Sanapia can cure ghost sickness. However, if Sanapia is successful in curing ghost sickness, why does she enjoy a relative lack of success in curing the victims of witchcraft when the symptomatic manifestations of the two are practically identical? Once again, as in the discussion of ghost sickness, a valuable clue is suggested by looking at standardization in the age and sex of the victims of the witch. The institution of witchcraft will be more thoroughly surveyed in Chapter 5. It seems most appropriate that the etiology of witchcraft symptoms should be discussed at this juncture since we are approaching the question of Sanapia's cultural function as curer of afflictions believed by the Comanches to be magically or supernaturally instigated.

The overwhelming majority of Comanche witch victims are infants, rarely more than several years of age. Therefore, we must base our attempt at explanation of the symptoms of witch sickness on an organic disorder which corresponds to the symptoms displayed by the witched victim. The medical literature presents an account of a disorder which corresponds in type to the symptoms present in ghost sickness and witch sickness, but which is limited, with rare exceptions, to infants less than two years of age. This neuromuscular disorder, tetany, also exhibits two symptoms by which Sanapia conceptually differentiates between witch sickness and ghost sickness by the degree of their severity. Sanapia points out that though witch- and ghost-sickness victims demonstrate similar modes of contortion, the witch victim's contortions appear most often in spasmodic fashion, while this trait is less marked in ghost sickness. Also, the peculiar contractions of the hands and arms, described in discussing ghost sickness, are more prevalent in cases of witch sickness. Further, two major causes of tetany in infants result from inadequate calcium intake and vitamin D deficiency, dietary lacks which could easily occur in the relatively poor environment in which many Comanche infants are reared.

Aub (1951:1275) mentions that signs of tetany will result from alkalosis of various origins, such as hyperventilation. The relationship of the emotion of fear to hyperventilation is noteworthy. Although the infant does not understand that he is the target of the witch, his parents do. Perhaps the parents' increased anxiety over the symptoms of tetany, which they could associate with witchcraft, only acts to increase anxiety in the infant, thus more readily acting to increase the possibility of hyperventilation. It is a common observation that the emotional state of parents can affect the emotional state of their infant children.

Because of the suggested differences in etiology of ghost sickness and witch sickness, Sanapia's success with ghost sickness and relative lack of success in curing witch sickness is understandable. She can relieve some of the symptoms of

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With regard to Sanapia's niece's child, Sanapia said that she knew who had witched the girl but did not tell the mother for fear of frightening her. Sanapia does not suggest that any supernatural talents are involved in the ability to identify the witch. Since Sanapia believes that witchcraft can only be operated by those with a high degree of *puha*, the field of possibilities is immediately narrowed. She evaluates the community in which the witch's victim lives and, through a process of elimination, selects the witch. She does not make her choice known for fear of frightening the victim or his parents, as has been mentioned, and also because she feels that if her accusations are made public, it would only cause further dissension among the Comanche people. She feels that there is enough tension among the Comanches without adding accusations of witchcraft.

The Contemporary Situation

This chapter has dealt with Sanapia's treatment of a victim who has been witched by the magical insertion of the malevolent essence of an eagle plume. Sanapia doctors also among the Wind River Shoshone, southern Cheyenne, southern and northern Arapaho, Kiowa, Kiowa-Apache, Ponca, Creek, and Fort Sill Apache, as well as the Comanche; and thus she has confronted cases of witchcraft other than the variety which has been described in this chapter. Her general approach to a cure, however, is similar in all cases. She feels that the body of the victim has been put out of balance by some tangible or intangible entity; therefore, to correct the abnormal condition, she works to remove that which is causing this physiological disequilibrium.

Given the antagonistic feelings beween the northern and southern Comanches and the fact that patterns of witchcraft exist, it would seem that there would be a high rate of intergroup witchcraft, at least being directed by the northerners. This does not appear to be the case, a major reason being that the southerners generally do not respond. They consider witches and witchcraft merely superstitious beliefs, or, at best, nonexistent in modern times. A further possible explanation of this lack of intergroup witchcraft is the special distribution of the Comanche bands—the more traditionally oriented bands cluster in the north and northwest of the Comanche area while the more fully acculturated band members are found in the south and southwest. There may be as many as 40 miles separating members of these two groups. Therefore, there is no necessity for daily social interaction between members of the opposing "tribes," which could reduce the generalized hostilities to more intense and socially unsettling personal conflict, thus better facilitating the desire and the opportunity for the execution of witchcraft.

Witchcraft among contemporary Comanches is mainly intergenerational. Older men and women, feeling their life power fading, turn to malevolent magic in an attempt to augment their failing social prestige and to defend themselves against the more vital younger generation. The few cases of witchcraft which I was able to investigate among the Comanches followed this general pattern of essentially intergenerational jealousy and tension. This was also the basic

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Conclusion

Lack of Comparable Material

MANY OF THE PROBLEMS in evaluating the material presented in this book stem from the fact that there is little Comanche information with which to compare it. The information contained in Kardiner's (1945) discussion of Comanche culture is based on data supplied largely by Ralph Linton which he gathered with the Santa Fe group in 1933. Wallace and Hoebel's (1952) book is almost totally based on material obtained in 1933 by this same group. Therefore, practically all that is known of Comanche ethnography is based on the circumstances of several months in 1933. A further problem is that Sanapia, in her role as eagle doctor, is unique in contemporary Comanche society. There is no one with whom to compare her. This also means that there is no way to check the information which Sanapia supplied, except so far as it was the type which could be verified by other Comanches. Consistency in her responses to the same questions asked at various times and her desire that this study act as the "book of her Medicine way" are the only indications which can be suggested to support the high probability of her veracity in materials which could not be otherwise checked.

Inconsistencies

The inconsistencies between data presented by Sanapia and the materials presented by the authors who have written on Comanche notions of power, magic, and religion have been noted in the body of the text. Since any conclusions based on these differences would necessarily be spurious, I will not introduce them again in conclusion. It is enough to say that Sanapia's interpretation of her relation to the supernatural is consistent to her and to other Comanches. It would be futile and improper to discuss whether she is "right" or whether Wallace, Hoebel, and Kardiner are "right."

ently the body cavities of these small animals were stuffed with grass before they were tied to the shield. The shield is 59 cm. in diameter and 5 to 6 mm. thick at the edge. Its front surface is further decorated with a painted reddish-brown stripe about 2.5 cm. wide, flanked with white stripes, two small green circles (one above and one below the stripe), and two U-shaped designs in green. The narrow loops of rawhide which pass through the shield surface provide an attachment at the back of the shield for a carrying strap of horsehide 7.5 cm. wide.

This shield is provided with a loosely fitted cover of soft skin, 60 cm. in diameter, which is held in place by a buckskin drawstring that gathers the outer edge of the cover at the back of the shield when pulled tight and tied. This cover is painted in a geometric design composed of a thick black border and an eight-pointed motive outlined in black and filled in with yellow paint (see Figure 20). The latter may be a conventionalized sun symbol.

A second shield base is but 31 cm. in diameter and 4 to 6 mm. thick at the edge. Only its cover is decorated (see Figure 21). A black line encircles the circumference of the cover; black and red concentric circles are painted at the center, and a hoofed mammal with horns—a buffalo or deer?—is painted in black. The tail of a cow, with the hair left on, is tied to the center of the cover as a pendant.[5]

The most elaborately decorated of the three shields is shown in Figures 22 and 23. Its cover (Figure 23) is 53.5 cm. in diameter and bears a conventionalized painting of a bear in black (12 cm. long), a black circle filled with black dots at the center, a black stripe below this, and two black dots to the left of the center. Four small feathers are also tied to the center of the cover. The base of this shield (Figure 22) is 50 cm. in diameter and 5 to 6 mm. thick at the edge. A border of red trade cloth 7 cm. wide is tied at intervals to the outer edge of the shield base. To the inner edge of this cloth are tied 73 pelican feathers as pendants. The trade cloth is decorated with a rectangle of blue pony beads about 7 by 6.5 cm. in size.

The base of this shield (with trade cloth and feather border removed to reveal the shield painting completely) is pictured in color on Plate 18. The large, horned figure in the center may represent either a buffalo or a man (much simplified and conventionalized) wearing a horned headdress. The two monochrome human figures, flanking the central figure, one black and one yellow, are rendered in the same style. Both have featureless rings for heads; short, solid necks; solid, roughly rectangular bodies; and linear ex-

5. This specimen was cat. no. 1470 in the Smithsonian collections but was transferred to the Field Museum, Chicago, in 1901 and is preserved in that museum as cat. no. 62579. Donald Collier, Chief Curator, Department of Anthropology, Field Museum, has kindly supplied photographs and measurements of this specimen.

A [See Plate 17, p. 180-A—Analyst.]

[TEXT CONTINUED ON PAGE 171]